



VWR INTERNATIONAL

ALL YOU NEED

FOR GENOMICS

Nucleic acid purification

Modifying enzymes

PCR

Real time PCR

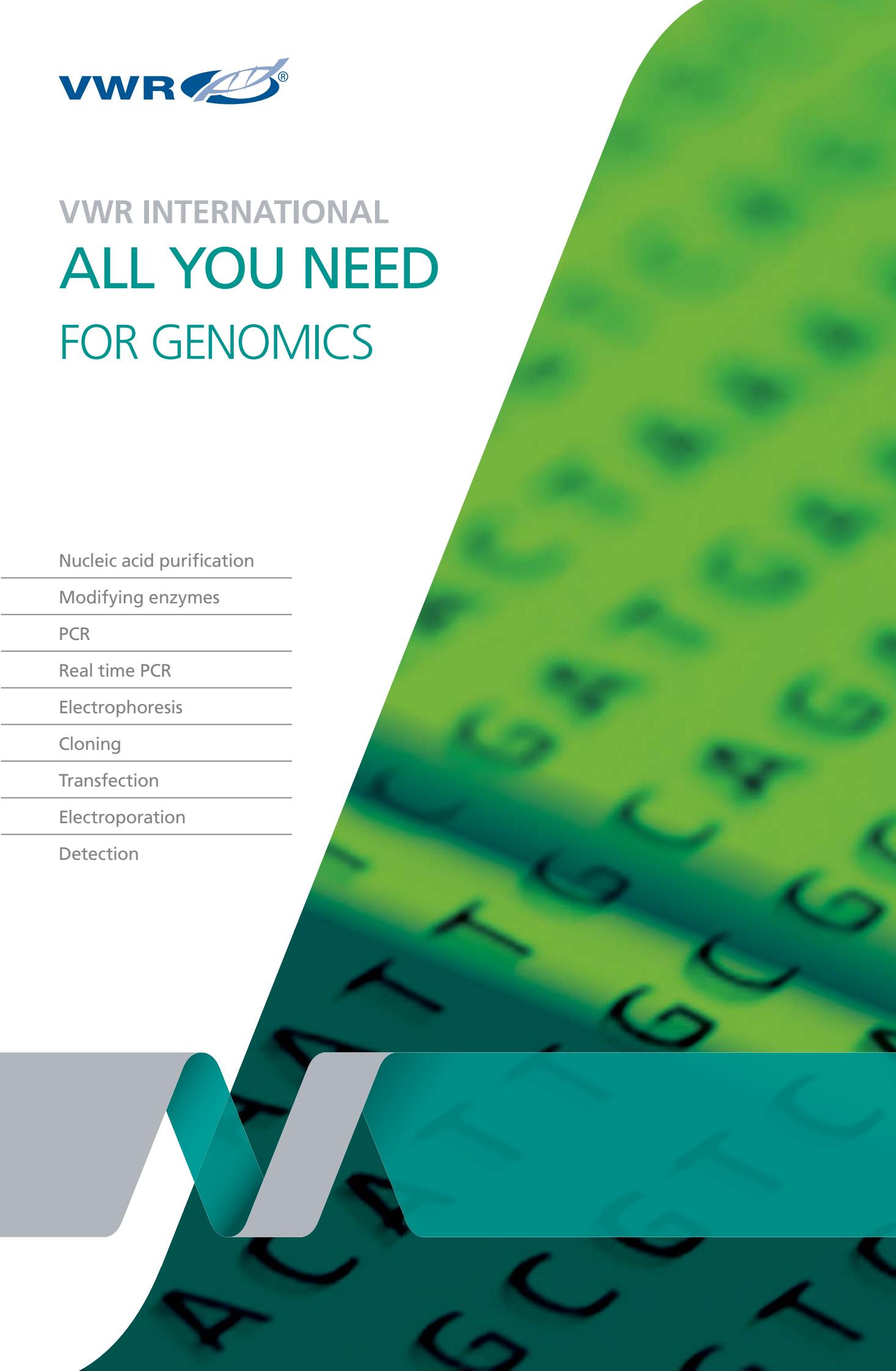
Electrophoresis

Cloning

Transfection

Electroporation

Detection



INTRODUCTION

Genomic aims to understand the structure and function of the genome, using gene mapping and DNA sequencing tools. This 'All you need guide' has been designed for those working in this exciting field exploring the molecular mechanisms and interplay of genetic and environmental factors in disease. It is packed with essential products covering workflows from nucleic acid purification to the invaluable PCR tool used in a wide array of downstream applications, such as cloning, gene expression analysis, genotyping, sequencing etc. It's really a 'tool box' for molecular biology applications.

VWR offers kits and reagents for isolation of plasmid, genomic DNA, RNA, mRNA and miRNA plus complete solutions for qPCR analysis, SYBR green and probe assays, including qPCR instrumentation. Our portfolio supports a wide range of high throughput and research application needs. In fact we can be your single source supplier for general equipment, reagents and consumables required for high-throughput, Next Gen Sequencing.

This guide can only really give you a flavour of what VWR International can offer. For our complete range review either our main catalogues or use our website that has thousands of products complete with a powerful search engine and advanced filtering to make your life easy. Our range includes all the market leading manufacturers as well as our own the great value for money VWR Collection, BDH Prolabo, Amresco and PBI brands. Visit our dedicated microsites at www.vwr.com for application based listings including environmental monitoring and up to date new product and promotional information.

We hope you find it a timesaving useful tool because we know that your work benefits us all.

Visit our dedicated microsites on [vwr.com](http://www.vwr.com) for a full range of:

Life Science



Research and Development



Safety and Cleaning



Our website contains all the products we offer and has a powerful search engine with advanced search filters to make life easy.

TABLE OF CONTENTS

Nucleic acid purification	5
Modifying enzymes	39
PCR	43
Real time PCR	77
Electrophoresis	97
Cloning	115
Transfection	119
Electroporation	125
Detection	135

GENOMIC SOLUTIONS

Sample prep

Plasmid purification reagents
Genomic DNA extraction reagents
RNA extraction reagents
PCR Clean – Up reagents
Modifying enzymes
Automation



PCR/qPCR

Standard PCR reagents
Hot Start and High fidelity PCR reagents
cDNA synthesis
qPCR reagents- SYBR green mixes and probe mixes
One-step qPCR reagents
PCR/qPCR plastic
PCR cyclers
qPCR cyclers
Heat Sealers
PCR workstations



Electrophoresis

Reagents – Agarose & Acrylamide
Buffers
Markers and dyes
Gel tanks
Power supplies



Transfection & Electroporation

Transfection reagents
Electroporation cuvettes
Electroporators



Cloning

PCR Cloning kit
cDNA clones



Detection

Spectrophotometers
Gel documentation systems
Transilluminators

Are you doing Next Gen Sequencing? Here's another tip for you...simplify the ordering process for your "User Supplied Consumables" list with VWR.

We can be your single-source supplier for general equipment, reagents and consumables required for high-throughput sequencing.



Description	Illumina	Roche	Life Tech	
Instrument Systems	Genome Analyzer (Ile, Ilx); HiSeq; MiSeq; HiScanSQ	454 GS-FLX; GS Junior	SOLiD	Ion Torrent
Reference Applications	TruSeq DNA; TruSeq RNA; Nextera XT, Nextera DNA; Nextera RNA	454 Rapid Library Prep; 454 Paired End Prep; 454 cDNA Rapid Prep; 454 Ampli- con Prep; 454 emPCR Prep	SOLiD Library Prep; SOLiD 2x50bp Mate Pair; SOLiD Barcode Library Prep	Ion Torrent Total RNA; Ion Torrent AmpliSeq
PIPETTORS & PIPETTE TIPS				
1 - 10 µl or 1 - 20 µl Multichannel Pipettor (8-channel)	613-1494	613-1494	613-1494	613-1494
10 µl Single Channel Pipettor	613-1489	613-1489	613-1489	613-1489
1000 µl Multichannel Pipettor	613-1974	613-1974	613-1974	613-1974
1000 µl Single Channel Pipettor	613-1493	613-1493	613-1493	613-1493
2 µl Multichannel Pipettor	613-1494	613-1494	613-1494	613-1494
2 µl Single Channel Pipettor	613-1488	613-1488	613-1488	613-1488
20 - 200 µl Multichannel Pipettor (8-channel)	613-1496	613-1496	613-1496	613-1496
20 µl Multichannel Pipettor	613-1495	613-1495	613-1495	613-1495
20 µl Single Channel Pipettor	613-1490	613-1490	613-1490	613-1490
200 µl Multichannel Pipettor	613-1496	613-1496	613-1496	613-1496
200 µl Single Channel Pipettor	613-1492	613-1492	613-1492	613-1492
2 µl Barrier Pipette Tips	732-1512	732-1512	732-1512	732-1512
10 µl Barrier Pipette Tips	732-1429	732-1429	732-1429	732-1429
20 µl Barrier Pipette Tips	732-1432	732-1432	732-1432	732-1432
200 µl Barrier Pipette Tips	732-1434	732-1434	732-1434	732-1434
1000 µl Barrier Pipette Tips	732-1435	732-1435	732-1435	732-1435
CONSUMABLES & PLASTICS				
0.2 ml PCR Tubes with Caps	732-0547	732-0547		
0.5 - 1.5 ml Tubes with O-ring in Caps, (for secure cold storage of dilute amplicons)		211-0121		
0.5 ml Microcentrifuge Tube, Low Retention			525-0229	525-0229
1.0 ml Sterile Dispenser Tips		613-1028		
10 ml Sterile Dispenser Tip		613-1031		
1.5 ml Microcentrifuge Tube, Low Retention	525-0230	525-0230	525-0230	525-0230
1.5 ml Microcentrifuge Tubes, Standard		211-0007		
1.7 ml Microcentrifuge Tubes, Low Retention		525-0231		
15 ml Conical Polypropylene Tubes		525-0304	525-0304	
15 ml Screw Cap Centrifuge Tubes		525-0150		
2.0 ml Microcentrifuge Tubes, Low Retention		525-0232	525-0232	
50 ml Screw Cap Centrifuge Tubes		525-0156		
96-well PCR Plate, 0.3 ml, Skirtless	211-0269			
96-well PCR Plates, Semi-Skirted		211-0283		
96-well Skirted PCR Plate		211-0297		
96-well Storage Plate, Round Well, 0.8 ml (MIDI Plate)	732-4900			
96-well, 0.3 ml PCR Plates	211-0269			
96-well, Flat Bottom, Black Microtiter Plate for Fluorescence Assay		734-0981		
Cap Strips for 96-well PCR Plates		732-0550		
Microseal 96-well PCR Plates (TCY plate)	732-1052			
Microseal Adhesive Plate Seals ("B")	732-7509			
PCR Plate Seals			732-0588	732-0588
PCR Strip Tubes & Caps, 8-strip			732-0551	732-0551

Description	Illumina	Roche	Life Tech	
Instrument Systems	Genome Analyzer (Illumina); HiSeq; MiSeq; HiScanSQ	454 GS-FLX; GS Junior	SOLiD	Ion Torrent
Reference Applications	TruSeq DNA; TruSeq RNA; Nextera XT, Nextera DNA; Nextera RNA	454 Rapid Library Prep; 454 Paired End Prep; 454 cDNA Rapid Prep; 454 Amplicon Prep; 454 emPCR Prep	SOLiD Library Prep; SOLiD 2x50bp Mate Pair; SOLiD Barcode Library Prep	Ion Torrent Total RNA; Ion Torrent AmpliSeq
Plate Thermoseals		732-7509		
RNase/DNase-Free Multichannel Reagent Reservoirs, Disposable	613-1191	613-1191	613-1191	613-1191
0.5 - 1.5 ml Tubes with O-ring in Caps		211-0090		
100 bp DNA Ladder			K180-250UL	
1kb DNA Ladder		K181-500UL		
25 bp DNA Ladder			AMREE840-100UG	
50 bp DNA Ladder			AMREN746-100RXN	
AMPure XP 1 ml Kit		VWRID6488-01, VWRID6486-01 other pack sizes available		
BenchTop 100bp DNA Ladder	AMREK180-250UL			
Certified Low-Range Ultra Agarose	AMREE776-250G			
Cre Recombinase		69247-3		
DNA Molecular Weight Marker (100bp), 100 - 1500 +2642 bp Range		K180-250UL		
DNase/RNase Zapper (to decontaminate surfaces)	732-2270	732-2270	732-2270	732-2270
dNTP Mix		733-1363		
Exonuclease I (20,000 U/ml)		E70073Z		
Fast Start High Fidelity PCR		733-0993		
MinElute Gel Extraction Kit	VWRID6294-02			
MinElute PCR Purification Kit		VWRID6296-02		
PCR Nucleotide Mix (10mM each)		733-1363		
PCR Purification Kit				VWRID6492-01 or VWRID492-02
Plasmid-Safe ATP-Dependent DNase (10,000 U/ml)		0649-100KU		
Polynucleotide Kinase (10,000 U/ml)		A5213.2500		
Rapid Ligase Kit		GENOBE-308		
SuperScript II Reverse Transcriptase	733-0108			
SyBr Gold Nucleic Acid Gel Stain	730-2957 & 730-2959			
SYBR Gold Nucleic Acid Gel Stain, 10,000X Concentrate in DMSO			730-2958 or N472-KIT N650-KIT/N313-KIT	730-2958 or N472-KIT N650-KIT/N313-KIT
T4 DNA Polymerase (1,000 U/ml)		ROCKMB-115-0100		
Thermo Scientific Owl B2 EasyCast Mini Gel System	730-0107			
GENERAL CHEMICALS				
0.5M EDTA		E177-500ML		
1,4-Dithiothreitol (ultrapure)		0281-25G		
100% Ethanol	101077Y			
100X TE, pH 8.0		A0973.1000		
10X Gel Loading Buffer			E190-5ML	
1X Low TE Buffer			E112-100ML, E112-500ML	
2-Propanol (Isopropanol)		20842.323		
4X Loading Buffer (50mM Tris pH 8.0, 40mM EDTA, 40% (w/v) sucrose, 0.3% bromophenol blue)	K945-5ML			
50X TAE Buffer, Molecular Grade	K915-1.6L		K915-1.6L	
Agencourt AMPure XP 60 ml Kit	VWRID6488-01, VWRID6486-01 other pack sizes available			
Bovine Serum Albumin (20 mg/ml)		422351S		
EDTA 0.5M, pH 8.0		E177-500ML		
Ethanol (99.5%)		20820.293DP	20820.293DP	
Ethanol 200 Proof (absolute), Molecular Biology Grade (500 ml)	A3678.1000			
Ethanol, 100% ACS Reagent Grade or Equivalent				101076H
Ethylene Glycol			0582-1L or 0582-4L	
Glycerol, Ultrapure		E520-100ML	E520-100ML	
Hydrochloric Acid, 0.20 N			31983.290	
Isopropyl Alcohol			437423R	
NaOH		1737.1000		
Nuclease-free Molecular Grade Water (not DEPC-treated), 100 ml	K683-100ML			K683-100ML

Description	Illumina	Roche	Life Tech	
Instrument Systems	Genome Analyzer (Ile, Iix); HiSeq; MiSeq; HiScanSQ	454 GS-FLX; GS Junior	SOLiD	Ion Torrent
Reference Applications	TruSeq DNA; TruSeq RNA; Nextera XT, Nextera DNA; Nextera RNA	454 Rapid Library Prep; 454 Paired End Prep; 454 cDNA Rapid Prep; 454 Amplicon Prep; 454 emPCR Prep	SOLiD Library Prep; SOLiD 2x50bp Mate Pair; SOLiD Barcode Library Prep	Ion Torrent Total RNA; Ion Torrent AmpliSeq
Nuclease-free Water, 1 L		E476-1L	E476-1L	
Sodium Acetate		27653.260		
Sodium Dodecyl Sulfate (SDS)		E0837-200ML		
Sodium Hydroxide, 0.20 N			31952.293	
TBE Running Buffer (5X), 1 L				J885-1L or 0658-1L
Tris Hydrochloride 1M		E199-500ML		
Tris-Cl 10mM, pH 8.5 with 0.1% Tween 20	33595.188			
Tween 20	0777-1L			
Zinc Chloride for Molecular Biology		APLIA6285.0250		
INSTRUMENTS & EQUIPMENT				
50 ml Tube Adaptors for Swinging Bucket Rotor		521-1409		
96-well Thermocycler	731-0236	731-0236	731-0236	731-0236
Agarose Gel Casting System		700-7213		
Amicon Ultra-0.5 ml Centrifuge Filter Unit		516-8492		
Balance (0.01 g precision)		611-1873		
Centrifugal Vacuum Concentrator (ie., SpeedVac)				521-1545
Centrifuge		521-1534; Centrifuge Incl. Swing Rotor and Buckets		
Dark Reader Transilluminator	732-4393			
Electrophoresis Power Supply	700-0115			
Electrophoresis System		700-7213		
Elutrap Starter Kit		732-4263		
Elutrap Starter Kit (with chamber optional)		732-4265		
Fixed-angle Rotor, 24 x 1.5/2mL, Aerosol-tight			521-0014	
Fluorometer		735-0268		
Gel Electrophoresis, Power Source & Transilluminator			Power Source: 700-0115	
Gel Electrophoresis, Power Source & Transilluminator			Transilluminator: 730-3006	
Gel Electrophoresis, Power Source & Transilluminator			Gel Electrophoresis: VWR, Hoefer, OWL, CSBS	
Glass Rods		441-9583		
Heat Block		460-3267		
High Speed Microplate Shaker	444-7016			
Incubator (37°C)			390-0298	
Incubator (65°C/70°C)			390-0467	
LabQuake Shaker/Rotator		444-0695 (Grant)		
Magnetic Particle Concentrator		28-9489-64		
Magnetic Stand for 1.5 ml Tubes				28-9489-64
Magnetic Stand-96	VWRIMSD-01 or VWRIMSD-01B			VWRIMSD-01 or VWRIMSD-01B
Microcentrifuge				521-1646 (vent), 521-1647 (refl)
Microcentrifuge (1000 - 16000 RCF)		521-1095, 521-1097		
Microcentrifuge, Refrigerated			521-0000	
Microplate Centrifuge	521-1648 (EU), 521-1649 (UK)			
Minifuge		521-2844 (EU), 521-2845 (UK), 521-2846 (CH)		
NanDrop™ ND-1000 Spectrophotometer (computer required)			28-9569-66	28-9569-66
Particle Counter		734-2477		
PCR Enclosure (PCR preparation)		730-0784		
Picofuge			521-1095	
Plate Centrifuge		521-1648 (EU), 521-1649 (UK)		
Plate Fluorometer, 96-well Half Area Plate		734-4153		
Plate Fluorometer, 96-well Plate Reader		735-0268		
Razor Blades			RSGA066.073	
Scale (Analytical balance)		611-1871		
Scale/Balance (0.01 g precision)		611-1873	611-1873	
Spatula		231-2237		
Tabletop Centrifuge			521-1531	
Thermocycler (with heated lid)		731-0236		
Timer			609-0138	
Transilluminator		730-3006		730-3006
Vortex Mixer	444-0007(EU), 444-0093 (UK)	444-0007(EU), 444-0093 (UK)	444-0007(EU), 444-0093 (UK)	444-0007(EU), 444-0093 (UK)



Standard High Purity Plasmid Isolation	6
Endotoxin Free Plasmid Isolation	8
Fastfilter Plasmid Isolation	9
Genomic DNA from Blood	10
Genomic DNA from Plant	12
Genomic DNA from Tissue and Cells	13
Genomic DNA from Yeast and Bacteria	15
Genomic DNA from Soil, Stool and Water	16
Genomic DNA from Fungi	17
Genomic DNA from Insect and Mollusc	18
Genomic DNA Preparation	19
RNA from Blood	20
miRNA/mRNA Isolation	21
RNA from Cells and Soft Tissue	23
RNA from Fatty Tissue	25
RNA from Fibrous Tissue	26
Total RNA Reagents	27
RNA Stabilisation	29
PCR Clean Up	30
DNA/RNA Gel Extraction	32
DNA/RNA Clean up	33
Dye Terminator Removal	34
DNA Storage	35

Nucleic Acid Purification

Nucleic Acid Purification

Standard High Purity Plasmid Isolation

E.Z.N.A.® Plasmid isolation kits

VWR by Omega bio-tek



Plasmid isolation kits for manual plasmid isolation from mini to giga scale. These kits enable the isolation of plasmid DNA by means of HiBind® columns. The E.Z.N.A.® method allows for plasmid DNA isolation from bacteria, yeast, or M13 phage. Plasmid, BAC, PAC, YAC, P1, cosmid, and phage DNA can be isolated and used for restriction digestion, transfection, transformation, routine screening and other downstream applications. V-spin columns feature an attached cap while Q-spin, Mini II, Midi and Maxi columns have a vacuum luer tip for a leak-free connection to a vacuum manifold or luer hub needle. These columns can be used for both centrifugation and vacuum protocols. HP plasmid isolation kits isolate high purity plasmid from a wide range of bacterial host strains, especially those that contain elevated levels of endonuclease activity in 30 minutes.



Description	Culture volume	DNA purity	Maximum yield	Pk	Cat. No.
E.Z.N.A.® Plasmid Mini kit I (V-Spin column)	1 - 5 ml	High-Purity	30 µg	50 Tests	D6943-01
E.Z.N.A.® Plasmid Mini kit I (V-Spin column)	1 - 5 ml	High-Purity	30 µg	200 Tests	D6943-02
E.Z.N.A.® Plasmid Mini kit I (Q-Spin column)	1 - 5 ml	High-Purity	35 µg	50 Tests	D6942-01
E.Z.N.A.® Plasmid Mini kit I (Q-Spin column)	1 - 5 ml	High-Purity	35 µg	200 Tests	D6942-02
E.Z.N.A.® Plasmid Mini kit II (Q-Spin column)	5 - 10 ml	High-Purity	70 µg	50 Tests	D6945-01
E.Z.N.A.® Plasmid Mini kit II (Q-Spin column)	5 - 10 ml	High-Purity	70 µg	200 Tests	D6945-02
E.Z.N.A.® Plasmid Midi kit I	15 - 50 ml	High-Purity	200 µg	25 Tests	D6904-03
E.Z.N.A.® Plasmid Midi kit I	15 - 50 ml	High-Purity	200 µg	100 Tests	D6904-04
E.Z.N.A.® Plasmid Maxi kit	50 - 200 ml	Ultra-Pure	0,5 - 1 mg	100 Tests	D6922-04
E.Z.N.A.® Plasmid Maxi kit I	50 - 200 ml	High-Purity	0,5 - 1 mg	5 Tests	D6922-01
E.Z.N.A.® Plasmid Maxi kit I	50 - 200 ml	High-Purity	0,5 - 1 mg	20 Tests	D6922-02
E.Z.N.A.® Plasmid Giga kit	200 - 500 ml	High-Purity	10 mg	20 Tests	D6920-03
E.Z.N.A.® HP Plasmid Mini kit I (V-Spin column)	1 - 5 ml	Ultra-Pure	30 µg	50 Tests	D7043-01
E.Z.N.A.® HP Plasmid Mini kit I (V-Spin column)	1 - 5 ml	Ultra-Pure	30 µg	200 Tests	D7043-02
E.Z.N.A.® HP Plasmid Mini kit II (Q-Spin Column)	5 - 15 ml	Ultra-Pure	70 µg	50 Tests	D7045-01
E.Z.N.A.® HP Plasmid Mini kit II (Q-Spin Column)	5 - 15 ml	Ultra-Pure	70 µg	200 Tests	D7045-02
E.Z.N.A.® HP Plasmid Midi kit	15 - 50 ml	Ultra-Pure	200 µg	10 Tests	D7004-01
E.Z.N.A.® HP Plasmid Midi kit	15 - 50 ml	Ultra-Pure	200 µg	50 Tests	D7004-02
E.Z.N.A.® HP Plasmid Maxi kit	100 - 200 ml	Ultra-Pure	1 mg	5 Tests	D7022-01
E.Z.N.A.® HP Plasmid Maxi kit	100 - 200 ml	Ultra-Pure	1 mg	20 Tests	D7022-02

Plasmid purification kits, PerfectPrep™ Spin Mini kit

5 PRIME

The PerfectPrep™ Spin Mini kit is a ready to use, complete kit providing all components and procedures necessary for purification of molecular biology grade plasmid DNA. The PerfectPrep™ miniprep system is designed for quick and convenient processing of up to 24 samples simultaneously in less than 30 minutes.

- 5 to 20 µg ready to use plasmid DNA in less than 30 minutes
- Simple bind-wash-elute procedure
- No resins, slurries or phenol

Description	Pk	Cat. No.
PerfectPrep™ Spin Mini kit, 50 preps	50 Tests	733-2069
PerfectPrep™ Spin Mini kit, 200 preps	200 Tests	733-2070

illuстра™ plasmidPrep Mini Spin kit

GE Healthcare

For the rapid isolation of high and low copy number plasmid DNA. Produces high quality plasmid DNA with excellent reproducibility for use in cloning, restriction enzyme digestion, PCR amplification, and DNA sequencing.

- Total preparation time of less than 10 minutes
- Plasmid DNA yield from a fresh 1,5 ml culture of *E. coli* containing high copy number plasmid typically 6 to 9 µg
- Easy to use
- No organic solvents needed

Delivery information: Each kit includes spin columns pre-packed with a silica membrane, suspension, lysis, and neutralisation buffers, wash and elution buffers, and microcentrifuge collection tubes.

Description	Pk	Cat. No.
illuстра™ plasmidPrep Mini Spin kit, 50 preps	50 Tests	28-9042-69
illuстра™ plasmidPrep Mini Spin kit, 250 preps	250 Tests	28-9042-70



illustra™ plasmidPrep Midi Flow kit

GE Healthcare

The illustra™ plasmidPrep Midi Flow kit can be used to process bacterial sample volumes of 25 to 50 ml for high copy number plasmid DNA and up to 500 ml for low copy number plasmid DNA. The illustra™ plasmidPrep Midi Flow kit is ideal for the rapid extraction and purification of high quality plasmid DNA from medium scale cultures for use in transfection, sequencing, and enzymatic amplification and modification.

- High column capacity allows for a proportional yield for input sample volume of 25 to 50 ml (for high copy number plasmid) and up to 500 ml for low copy number plasmid
- Easy to use

Description	Pk	Cat. No.
illustra™ plasmidPrep Midi Flow kit, 25 preps	1 KIT	28-9042-67
illustra™ plasmidPrep Midi Flow kit, 100 preps	1 KIT	28-9042-68

illustra™ TempliPhi Sequence Resolver kit

GE Healthcare

The illustra TempliPhi Sequence Resolver kit uses the highly processive, strand-displacing Phi29 DNA polymerase and modified nucleotides to amplify circular templates for subsequent sequencing. The kit can be used with both small (plasmids, M13) and large (fosmids and bacterial artificial chromosomes (BACs)) circular templates. The starting template for the reaction can be purified DNA, glycerol stock, liquid culture or colonies. The reaction takes less than 20 minutes to prepare and after an overnight incubation at 10°C, it is ready to be used directly in sequencing applications with the sequencing chemistry of choice. A 10 µl reaction typically yields 1 µg of DNA in a standard overnight reaction. The illustra TempliPhi Sequence Resolver Kit is ideal for the amplification of difficult templates for successful DNA sequencing.

- Solves the most common sequencing problems, such as repeats, sequencing stops, and compressions, with a single kit
- Improves difficult template sequencing success with up to 820 bp Phred 20 read length
- Cultureless preparation from bacterial colonies, glycerol stock or purified DNA, saves time and reagents
- Easy to use kit requires only 20 minutes hands-on time
- Amplified DNA can be directly used in sequencing reactions

Description	Pk	Cat. No.
illustra™ TempliPhi Sequence Resolver kit, 50 reactions	50 Tests	28-9035-30
illustra™ TempliPhi Sequence Resolver kit, 200 reactions	200 Tests	28-9035-31

E-BUSINESS

More than just a webshop for all of your laboratory needs

Please visit us at: <http://eu.vwr.com/e-business>

Nucleic Acid Purification

Endotoxin-Free Plasmid Isolation

E.Z.N.A.® Endo-Free Plasmid kits

VWR by Omega bio-tek



Plasmid isolated with traditional purification procedures normally contain high levels of endotoxins that can significantly interfere with transfection experiments downstream. The E.Z.N.A.® Endo-Free Plasmid kits integrate an efficient endotoxin removal step into the plasmid purification procedure to produce high quality transfection grade plasmid.



Description	Culture volume	DNA purity	Maximum yield	Pk	Cat. No.
E.Z.N.A.® Endo-Free Plasmid Mini kit I	1 - 5 ml	Endotoxin-free	35 µg	50 Tests	D6948-01
E.Z.N.A.® Endo-Free Plasmid Mini kit I	1 - 5 ml	Endotoxin-free	35 µg	200 Tests	D6948-02
E.Z.N.A.® Endo-Free Plasmid Mini kit II	5 - 10 ml	Endotoxin-free	70 µg	50 Tests	D6950-01
E.Z.N.A.® Endo-Free Plasmid Mini kit II	5 - 10 ml	Endotoxin-free	70 µg	200 Tests	D6950-02
E.Z.N.A.® Endo-Free Plasmid Midi kit	15 - 50 ml	Endotoxin-free	200 µg	10 Tests	D6915-01
E.Z.N.A.® Endo-Free Plasmid Midi kit	15 - 50 ml	Endotoxin-free	200 µg	25 Tests	D6915-03
E.Z.N.A.® Endo-Free Plasmid Midi kit	15 - 50 ml	Endotoxin-free	200 µg	100 Tests	D6915-04
E.Z.N.A.® Fastfilter® Endo-Free Plasmid Maxi kit	50 - 200 ml	Endotoxin-free	1 mg	25 Tests	D6926-03
E.Z.N.A.® Fastfilter® Endo-Free Plasmid Maxi kit	50 - 200 ml	Endotoxin-free	1 mg	100 Tests	D6926-04
E.Z.N.A.® Fastfilter® Endo-Free Plasmid Maxi kit	100 - 200 ml	Endotoxin-free	1 mg	6 Tests	D6926-01

Plasmid purification kit, PerfectPrep™ EndoFree Plasmid Maxi kit

5 PRIME

The PerfectPrep™ EndoFree Maxi kit generates high quality plasmid DNA with an endotoxin removal process, for use in advanced downstream applications. This kit is designed to isolate plasmid DNA of the highest purity from 100 ml of bacterial cultures for high copy plasmids or 250 ml of bacterial culture for low copy plasmid yielding up to 1000 µg of transfection-grade plasmid DNA. The PerfectPrep™ EndoFree Maxi Kit includes PerfectPrep™ EndoFree filter CS, which allows the clarification of the bacterial lysate. The DNA is purified further with a silica membrane. The resulting plasmid DNA is highly suited for use in a broad variety of demanding applications, including transfection of sensitive and primary cell lines, *in vitro* transcription and translation, and all enzymatic modifications.

- Rapid and simple purification in less than 40 minutes
- Up to 1000 µg of high quality plasmid DNA
- High mammalian cell viability post-transfection due to efficient endotoxin removal

Description	Pk	Cat. No.
PerfectPrep™ EndoFree Plasmid Maxi kit, 10 preps	10 Tests	733-1942

**E.Z.N.A.® Fastfilter® Plasmid kits**

VWR by Omega bio-tek



E.Z.N.A.® Fastfilter® Plasmid kits rapidly purify plasmid DNA utilising lysate clearance filter syringes, whilst E-Z 96® Fastfilter Plasmid kits employ lysate clearance plates in a 96-well format.



Description	Culture volume	DNA purity	Maximum yield	Pk	Cat. No.
E.Z.N.A.® Fastfilter® Plasmid Maxi kit	50 - 200 ml	Ultra-Pure	1 mg	5 Tests	D6924-01
E.Z.N.A.® Fastfilter® Plasmid Maxi kit	50 - 200 ml	Ultra-Pure	1 mg	25 Tests	D6924-03
E.Z.N.A.® Fastfilter® Plasmid Maxi kit	50 - 200 ml	Ultra-Pure	1 mg	100 Tests	D6924-04
E.Z.N.A.® Fastfilter® Plasmid Mega kit	200 - 500 ml	Ultra-Pure	2,5 mg	5 Tests	D6929-01
E.Z.N.A.® Fastfilter® Plasmid Mega kit	200 - 500 ml	Ultra-Pure	2,5 mg	20 Tests	D6929-03
E.Z.N.A.® Fastfilter® Plasmid Midi kit	15 - 50 ml	Ultra-Pure	200 µg	5 Tests	D6905-01
E.Z.N.A.® Fastfilter® Plasmid Midi kit	15 - 50 ml	Ultra-Pure	200 µg	25 Tests	D6905-03
E.Z.N.A.® Fastfilter® Plasmid Midi kit	15 - 50 ml	Ultra-Pure	200 µg	100 Tests	D6905-04
E-Z 96® Fastfilter® Plasmid kit (4x96)	700 µl - 1 ml/well	Ultra-Pure	12 µg/well	1 KIT	D1097-01
E-Z 96® Fastfilter® Plasmid kit (20x96)	700 µl - 1 ml/well	Ultra-Pure	12 µg/well	1 KIT	D1097-02

FastPlasmid Mini kit**5 PRIME**

The FastPlasmid Mini kit is a rapid, efficient kit for isolating high quality plasmid DNA. Plasmid purification can be performed in as little as 9 minutes. Up to 20 µg of high-copy plasmid DNA can be isolated from 1,5 ml of bacterial culture. Average yield with a high-copy vector and culture in LB medium is 10 µg.

- Time savings with fast procedure, taking as little as 9 minutes
- One-step lysis for simplified handling
- Yields reproducible, high quality, sequencing grade, plasmid DNA
- 1,5 ml of bacterial culture yields up to 20 µg high copy plasmid
- No special equipment required

Description	Pk	Cat. No.
FastPlasmid Mini kit, 100 preps	100 Tests	733-0175
FastPlasmid Mini kit, 250 preps	250 Tests	733-0176

THE CHEMICAL BRAND
FROM VWR INTERNATIONAL

VWR **PROLABO**

Order your free copy online at <http://eu.vwr.com/chemical>



Nucleic Acid Purification

Genomic DNA from Blood

E.Z.N.A.® Blood DNA Kits

VWR by Omega bio-tek



E.Z.N.A.® Blood DNA kits provide rapid total DNA isolation from fresh and frozen anticoagulated whole blood. The kits can also be used for the preparation of genomic DNA from buffy coat, serum, plasma, bone marrow, lymphocytes, platelets, and body fluids. The kits allow for simultaneous processing of single or multiple samples in less than 30 minutes. Phenol/chloroform extractions, and time-consuming steps such as precipitation with isopropanol or ethanol have been eliminated. DNA purified with the E.Z.N.A.® Blood DNA method is ready for applications such as PCR, Southern blotting, or restriction enzyme digestion.

- Speed: DNA isolation in under 30 minutes
- Reliable: Optimised buffers guarantee pure DNA every time

- Safe: No organic extractions
- Quality: Purified DNA suitable for most applications

Description	Average yield	Binding capacity	Sample size	Pk	Cat. No.
E.Z.N.A.® Blood DNA Maxiprep kit	1,0 - 1,2 mg	400 - 1200 µg DNA	20 ml	10 Tests	D2492-01
E.Z.N.A.® Blood DNA Maxiprep kit	1,0 - 1,2 mg	400 - 1200 µg DNA	20 ml	20 Tests	D2492-02
E.Z.N.A.® Blood DNA Maxiprep kit	1,0 - 1,2 mg	400 - 1200 µg DNA	20 ml	50 Tests	D2492-03
E.Z.N.A.® Blood DNA Midi Prep kit II	200 - 250 µg DNA	10 ml	10 Tests	D3494-01	
E.Z.N.A.® Blood DNA Midi Prep kit II	200 - 250 µg DNA	10 ml	50 Tests	D3494-03	
E.Z.N.A.® Blood DNA Midi Prep kit II	200 - 250 µg DNA	10 ml	100 Tests	D3494-04	
E.Z.N.A.® Blood DNA Mini kit	100 µg DNA	1 - 250 µl	5 Tests	D3392-00	
E.Z.N.A.® Blood DNA Mini kit	100 µg DNA	1 - 250 µl	50 Tests	D3392-01	
E.Z.N.A.® Blood DNA Mini kit	100 µg DNA	1 - 250 µl	200 Tests	D3392-02	
E.Z.N.A.® NRBC Blood DNA kit	100 µg DNA	5 - 10 µl	50 Tests	D0715-01	
E.Z.N.A.® NRBC Blood DNA kit	100 µg DNA	5 - 10 µl	200 Tests	D0715-02	

DNA isolation kits, ArchivePure™ DNA Blood kit

5 PRIME

ArchivePure™ Blood kit is optimised for genomic DNA isolation from 150 µl to 10 ml of fresh or frozen whole blood, bone marrow, packed cells, or buffy coat samples.

- DNA purification from a wide variety of sample types
- Protocols are scalable
- Premixed and ready to use reagents
- Isolates high molecular weight DNA, from 100 to 200 kb
- Fast procedure

Description	Pk	Cat. No.
ArchivePure™ DNA Blood kit, for 30 ml blood	1 KIT	733-1014
ArchivePure™ DNA Blood kit, for 120 ml blood	1 KIT	733-1015
ArchivePure™ DNA Blood kit, for 1000 ml blood	1 KIT	733-1016

DNA purification kits, PerfectPure™ DNA Blood kit

5 PRIME

PerfectPure™ DNA purification kits utilise column-based technology, eliminating the most common problems of genomic DNA purification, such as overloading and clogging.

PerfectPure DNA Blood kits are available for whole blood and buffy coat samples ranging from 0,05 to 10 ml. In 60 minutes or less up to 350 µg of DNA from 10 ml whole blood can be obtained. Samples from 0,05 to 0,4 ml can be completed in 30 minutes or less.

- Straightforward and efficient process
- High quality genomic DNA from whole blood and culture cells
- Non toxic procedure
- Genomic DNA free from contaminants

Description	Pk	Cat. No.
PerfectPure DNA Blood kit, 0,4 ml, 50 preps	50 Tests	733-1068
PerfectPure DNA Blood kit, 3 ml, 50 preps	50 Tests	733-1069
PerfectPure DNA Blood kit, 10 ml, 50 preps	50 Tests	733-1070



DNA purification kits, Ready PCR DNA column kit

5 PRIME

The Ready PCR DNA column kit provides the components and procedures necessary for purifying genomic, mitochondrial, and viral DNA from whole blood, bone marrow, buffy coat, body fluids, cultured cells, cells in suspension (including tissue homogenates), and Gram-negative bacteria. Each 200 μ l column is designed to purify to 60 μ g of DNA from up to 1×10^6 cells per sample.

- Consistently produces high yields of PCR-ready DNA for screening
- Simple, two solution system
- Quick and easy protocol
- Yields up to 60 μ g per sample

Description	Pk	Cat. No.
Ready PCR DNA column kit, 50 preps	50 Tests	733-1050

illustra™ blood genomicPrep Mini Spin kit

GE Healthcare



For the rapid and reproducible isolation of high quality genomic DNA from whole blood, buffy coat, bone marrow, and nucleated red blood cells. The purification process involves minimal shearing resulting in the production of 5 to 10 μ g of good quality, intact genomic DNA from a 200 μ l sample.

- High quality genomic DNA
- Suitable for various types of whole blood including human, horse, rabbit, rat and mouse
- Easy to use
- Validated in several downstream applications

Description	Pk	Cat. No.
illustra™ blood genomicPrep Mini Spin kit, 50 preps	50 Tests	28-9042-64
illustra™ blood genomicPrep Mini Spin kit, 250 preps	250 Tests	28-9042-65

illustra™ blood genomicPrep Midi Flow kit

GE Healthcare

The illustra™ blood genomicPrep Midi Flow kit can be used to purify genomic DNA from human whole blood, buffy coat, and animal blood such as horse, sheep, rat, mouse, guinea pig, and chicken whole blood. The kit provides yields of up to 250 μ g of high quality genomic DNA. The kit is robust, highly reproducible, and versatile allowing the choice of either gravity or spin methods with input sample volumes of 1 to 8 ml.

- Shorter total DNA extraction time of 2 hours and less hands on time
- Validated in real time PCR, end point PCR, multiplex PCR, and restriction digest
- Increased ease of use

Description	Pk	Cat. No.
illustra™ blood genomicPrep Midi Flow kit, 25 preps	1 KIT	28-9042-61
illustra™ blood genomicPrep Midi Flow kit, 100 preps	1 KIT	28-9042-62

Nucleic Acid Purification

Genomic DNA from Plant

E.Z.N.A.® Plant DNA kits

VWR by Omega bio-tek



E.Z.N.A.® Plant DNA kits are used to isolate DNA from samples with high polysaccharides, phenolic compounds, and enzyme inhibitors. E.Z.N.A.® HP Plant DNA kits are designed for recovery of genomic DNA from fresh and dried plant tissue samples rich in lipid, polyphenol and polysaccharides or those with lower DNA contents. E.Z.N.A.® SP Plant DNA kits are specially designed for the rapid and reliable isolation of high quality total cellular DNA from a variety of plant species and tissues.



Description	Average yield	Sample size	Pk	Cat. No.
E.Z.N.A.® Plant DNA kit	8 - 50 µg	100 mg wet or 30 mg dry tissue	50 Tests	D3485-01
E.Z.N.A.® Plant DNA kit	8 - 50 µg	100 mg wet or 30 mg dry tissue	200 Tests	D3485-02
E.Z.N.A.® Plant DNA Midi Prep kit	20 - 100 µg from dried tissue; 3 - 30 µg from 100 mg fresh leaf tissue	500 mg wet or 125 mg dry tissue	10 Tests	D3487-01
E.Z.N.A.® Plant DNA Midi Prep kit	20 - 100 µg from dried tissue; 3 - 30 µg from 100 mg fresh leaf tissue	500 mg wet or 125 mg dry tissue	25 Tests	D3487-02
E.Z.N.A.® Plant DNA Maxi Prep kit	600 µg - 2,5 mg	2 g wet or 500 mg dry tissue	5 Tests	D3488-01
E.Z.N.A.® Plant DNA Maxi Prep kit	600 µg - 2,5 mg	2 g wet or 500 mg dry tissue	20 Tests	D3488-02
E.Z.N.A.® HP Plant DNA kit	10 - 50 µg DNA	100 mg of wet or 30 mg dry tissue	50 Tests	D2485-01
E.Z.N.A.® HP Plant DNA kit	10 - 50 µg DNA	100 mg of wet or 30 mg dry tissue	200 Tests	D2485-02
E.Z.N.A.® HP Plant DNA Midi kit			10 Tests	D2086-01
E.Z.N.A.® HP Plant DNA Midi kit			25 Tests	D2086-02
E.Z.N.A.® HP Plant DNA Maxi kit			5 Tests	D2087-01
E.Z.N.A.® HP Plant DNA Maxi kit			20 Tests	D2087-02
E.Z.N.A.® SP Plant DNA kit	30 - 60 µg	100 mg of wet or 30 mg dry tissue	50 Tests	D5511-01
E.Z.N.A.® SP Plant DNA kit	30 - 60 µg	100 mg of wet or 30 mg dry tissue	200 Tests	D5511-02
E.Z.N.A.® SP Plant DNA Midi kit	200 - 250 µg	500 mg of wet or 125 mg dry tissue	10 Tests	D5528-01
E.Z.N.A.® SP Plant DNA Midi kit	200 - 250 µg	500 mg of wet or 125 mg dry tissue	25 Tests	D5528-02
E.Z.N.A.® SP Plant DNA Maxi kit	1,0 - 2,5 mg	1 g of wet or 300 mg dry tissue	5 Tests	D5538-01
E.Z.N.A.® SP Plant DNA Maxi kit	1,0 - 2,5 mg	1 g of wet or 300 mg dry tissue	20 Tests	D5538-02
E-Z 96® Plant DNA kit (1x96)	10 - 25 µg DNA from 10 mg dried tissue	30 mg of wet or 10 mg dry tissue	1 KIT	D1086-01
E-Z 96® Plant DNA kit (4x96)	10 - 25 µg DNA from 10 mg dried tissue	30 mg of wet or 10 mg dry tissue	1 KIT	D1086-02

INSTRUMENT SERVICE AND MAINTENANCE

Please contact your local VWR sales office for more information





E.Z.N.A.® Tissue DNA kits

VWR by Omega bio-tek



Kits allowing DNA isolation from animal tissue are available in a choice of different formats. Magnetic bead-based kits can be adapted to most robotic liquid handling platforms. SQ kits use a solution-based extraction method allowing for varying sample size and high sample throughput extractions.



Description	Average yield	Elution volume	Sample size	Pk	Cat. No.
E.Z.N.A.® Tissue DNA kit (V-Spin)	10 - 40 µg DNA	100 - 200 µl	30 mg	50 Tests	D3396-01
E.Z.N.A.® Tissue DNA kit (V-Spin)	10 - 40 µg DNA	100 - 200 µl	30 mg	200 Tests	D3396-02
E.Z.N.A.® HP Tissue DNA Midi kit	400 - 600 µg		500 mg	10 Tests	D5197-01
E.Z.N.A.® HP Tissue DNA Midi kit	400 - 600 µg		500 mg	25 Tests	D5197-02
E.Z.N.A.® HP Tissue DNA Maxi kit	1,0 - 1,2 mg		Up to 2 g	10 Tests	D5196-01
E.Z.N.A.® HP Tissue DNA Maxi kit	1,0 - 1,2 mg		Up to 2 g	25 Tests	D5196-02
E.Z.N.A.® SQ Tissue DNA kit (1 g)	Up to 450 µg		1 g	1 KIT	D6032-01
E.Z.N.A.® SQ Tissue DNA kit (5 g)	Up to 450 µg		5 g	1 KIT	D6032-02
E-Z 96® Tissue DNA kit (4×96)	10 - 40 µg DNA		30 mg	1 KIT	D1196-01
E-Z 96® Tissue DNA kit (20×96)	10 - 40 µg DNA		30 mg	1 KIT	D1196-02

DNA/RNA extraction kits, for formalin-fixed, paraffin-embedded tissue

VWR by Omega bio-tek



Selected protease digestion releases microgram amounts of DNA and RNA from FFPE samples. The purified nucleic acids, although highly fragmented, are suitable for a variety of downstream genomic and gene expression analyses. E.Z.N.A.® spin column-based kits are ideal for low throughput applications while Mag-Bind® magnetic beads-based kits are designed specifically for high throughput users with automation capability.



- Impressive yield in as little as 40 minutes
- Standard protocol requires no xylene extraction
- Magnetic bead-based kits fully compatible with most automation platforms

Description	Pk	Cat. No.
E.Z.N.A.® FFPE DNA Isolation kit	50 Tests	D3399-01
E.Z.N.A.® FFPE DNA Isolation kit	200 Tests	D3399-02
Mag-Bind® FFPE DNA 96 kit (4×96)	1 KIT	M6958-01
Mag-Bind® FFPE DNA 96 kit (20×96)	1 KIT	M6958-02

illuстра™ triplePrep kit

GE Healthcare



The illuстра™ triplePrep kit is designed for the rapid isolation and purification of high yield genomic DNA (gDNA), total RNA, and total denatured proteins from undivided animal tissues and mammalian cells. The streamlined workflow reduces the overall number of steps, enabling the preparation of all three analytes in less than 1 hour.

- Isolate gDNA, total RNA, and total denatured proteins from undivided tissue and cell samples in less than 1 hour
- Directly correlate DNA, RNA, and protein data from the same sample
- Flexible workflow allows easy isolation of any two or all three analytes

Description	Pk	Cat. No.
illuстра™ triplePrep kit, 50 preps	50 Tests	28-9425-44

Nucleic Acid Purification

Genomic DNA from Tissue and Cells

DNA isolation kits, ArchivePure™ DNA Cell/Tissue and Tissue kits

ArchivePure™ DNA Cell/Tissue and Tissue kits are designed for genomic DNA isolation from cells and fresh, frozen, fixed or paraffin-embedded tissue samples.

- DNA purification from a wide variety of sample types including cells, body fluid, Gram-negative bacteria and tissue samples with a single kit
- Premixed and ready to use reagents
- Isolates high molecular weight DNA with exceptional purity
- Fast procedure

Delivery information: All kits contains cell lysis solution, protein precipitation solution, DNA hydration solution, and RNase A solution (4 mg/ml). Tissue kits also contain proteinase K solution (20 mg/ml).

Description	Pk	Cat. No.
ArchivePure™ DNA Cell/Tissue kit, for 1g tissue or 2×10^8 cells	1 KIT	733-1018
ArchivePure™ DNA Cell/Tissue kit, for 4 g tissue or 8×10^8 cells	1 KIT	733-1019
ArchivePure™ DNA Cell/Tissue kit, 33 g tissue or 16×10^8 cells	1 KIT	733-1020
ArchivePure™ DNA Tissue kit, for 100 mg tissue	1 KIT	733-1021
ArchivePure™ DNA Tissue kit, for 4 g tissue	1 KIT	733-1022

illuстра™ tissue and cells genomicPrep Mini Spin kit

GE Healthcare

For the rapid extraction and purification of high quality genomic DNA from a variety of animal tissues and mammalian cell cultures.

- Capable of purifying up to 1.5 μ g/mg of tissue from an input tissue sample range of 5 to 50 mg, and up to 40 μ g of genomic DNA per 5×10^6 cells depending on cell type
- Total DNA extraction time approximately 90 minutes
- Validated in real time PCR, end point PCR, multiplex PCR, and restriction enzyme digests

Description	Pk	Cat. No.
illuстра™ tissue and cells genomicPrep Mini Spin kit, 50 preps	50 Tests	28-9042-75
illuстра™ tissue and cells genomicPrep Mini Spin kit, 250 preps	250 Tests	28-9042-76

illuстра™ tissue and cells genomicPrep Midi Flow kit

GE Healthcare

For the high yield extraction and purification of high quality genomic DNA from tissues and cells.

- High quality genomic DNA
- Increased input capacity of 200 mg of tissue or up to 2×10^7 cells and a higher resin capacity of 250 μ g
- Validated in real time PCR, end point PCR, multiplex PCR, and restriction enzyme digests
- Shorter total DNA extraction time of 3 to 4 hours
- Flexibility to use pre-equilibrated fast-flow resin columns in spin or gravity mode

Sample type	Animal tissue (rat liver)	Cell culture
Sample input amount	60 to 200 mg (100 mg optimum)	1×10^7 to 2×10^7 cells (2×10^7 optimum)
Average yield	100 - 135 μ g	100 - 135 μ g
Genomic DNA purity (A260/A280)	1,7 - 1,9	1,7 - 1,9
Genomic DNA size (kb)	> 50	> 50

Description	Pk	Cat. No.
illuстра™ tissue and cells genomicPrep Midi Flow kit, 25 preps	25 Tests	28-9042-73



E.Z.N.A.® Bacteria and Yeast DNA kits

VWR by Omega bio-tek



The E.Z.N.A.® Bacterial DNA kit allows the rapid and reliable isolation of high quality total cellular DNA from a wide variety of bacterial species. E.Z.N.A.® Yeast DNA kit is comprised of a quick and efficient lysis procedure to isolate high quality genomic, YAC, or plasmid DNA from yeast.



Bacteria

Description	Average yield	Sample size	Pk	Cat. No.
E.Z.N.A.® Bacterial DNA Mini kit	15 - 30 µg	3 ml log phase culture	50 Tests	D3350-01
E.Z.N.A.® Bacterial DNA Mini kit	15 - 30 µg	3 ml log phase culture	200 Tests	D3350-02

Yeast

Description	Binding capacity	Sample size	Pk	Cat. No.
E.Z.N.A.® Yeast DNA kit	15 - 30 µg DNA	3 ml log phase culture	50 Tests	D3370-01
E.Z.N.A.® Yeast DNA kit	15 - 30 µg DNA	3 ml log phase culture	200 Tests	D3370-02

DNA isolation kits, ArchivePure™ DNA Yeast and Gram-positive Bacteria kit

5 PRIME

The ArchivePure™ DNA Yeast and Gram-positive Bacteria kit includes specialised cell suspension and lytic enzyme solutions to enable efficient cell wall lysis of yeast, fungi and Gram-positive bacteria.

- Premixed and ready to use reagents
- Isolates high molecular weight DNA with exceptional purity
- Fast procedure

Description	Pk	Cat. No.
ArchivePure™ DNA Yeast and Gram-positive Bacteria kit, 400 preps	1 KIT	733-1033



Nucleic Acid Purification

Genomic DNA from Soil, Stool and Water

E.Z.N.A.® Soil, Stool and Water DNA kits

VWR by Omega bio-tek



The E.Z.N.A.® Soil DNA kit and the E.Z.N.A.® Water DNA kit have been formulated to isolate high purity cellular DNA from soil or water samples typically containing humic acid and inhibitors of PCR. These kits have been successfully used to isolate DNA from tough-to-lyse bacteria, fungi, and algae that inhabit a range of samples including clay, sandy, peaty, chalky, and loamy soil samples and tap water, lake, river and sewage samples. Isolated DNA can be used for most downstream applications including PCR, Southern blot, SNP analysis. The E.Z.N.A.® Stool DNA kit allows rapid and reliable isolation of high-quality total DNA by combining the reversible nucleic acid-binding properties of HiBind matrix with the speed and versatility of spin column technology to eliminate humic acid, polysaccharides, phenolic compounds, and enzyme inhibitors from fresh or frozen stool samples. Purified DNA is suitable for

PCR, restriction digestion, and hybridisation techniques.

Soil

Description	Sample size	Pk	Cat. No.
E.Z.N.A.® Soil DNA Mini kit	1 g	50 Tests	D5625-01
E.Z.N.A.® Soil DNA Mini kit	1 g	200 Tests	D5625-02

Stool

Description	Sample size	Pk	Cat. No.
E.Z.N.A.® Stool DNA kit	200 mg	50 Tests	D4015-01
E.Z.N.A.® Stool DNA kit	200 mg	200 Tests	D4015-02

Water

Description	Pk	Cat. No.
E.Z.N.A.® Water DNA kit	50 Tests	D5525-01
E.Z.N.A.® Water DNA kit	200 Tests	D5525-02

PIPETTE CALIBRATION AT VWR INTERNATIONAL

VWR
PIPET SERVICES™

All brands and all models
calibrated by certified technicians.

**E.Z.N.A.® Fungal DNA kits**

VWR by Omega bio-tek



The E.Z.N.A.® Fungal DNA kits allow for the rapid and reliable isolation of high quality total cellular DNA from a wide variety of fungal species without the need for organic extraction. The E.Z.N.A.® SP Fungal DNA kit incorporates a filtration and homogenisation column that can efficiently remove cell debris and improve sample handling following lysis. The E.Z.N.A.® High Performance (HP) DNA Kit is designed for efficient recovery of genomic DNA up to 60 kb in size from fresh and dried fungal tissue samples rich in polysaccharides or with lower DNA contents.



Description	Average yield	Sample size	Pk	Cat. No.
E.Z.N.A.® Fungal DNA Mini kit	10 - 40 µg	100 mg wet or 30 mg dry tissue	50 Tests	D3390-01
E.Z.N.A.® Fungal DNA Mini kit	10 - 40 µg	100 mg wet or 30 mg dry tissue	200 Tests	D3390-02
E.Z.N.A.® Fungal DNA Midi kit	200 - 250 µg	500 mg wet or 100 mg dry tissue	10 Tests	D3590-01
E.Z.N.A.® Fungal DNA Midi kit	200 - 250 µg	500 mg wet or 100 mg dry tissue	25 Tests	D3590-02
E.Z.N.A.® Fungal DNA Maxi kit	1 - 2 mg	2,5 g wet or 300 mg dry tissue	5 Tests	D3690-01
E.Z.N.A.® Fungal DNA Maxi kit	1 - 2 mg	2,5 g wet or 300 mg dry tissue	20 Tests	D3690-02
E.Z.N.A.® HP Fungal DNA kit			50 Tests	D3195-01
E.Z.N.A.® HP Fungal DNA kit			200 Tests	D3195-02
E.Z.N.A.® SP Fungal DNA Mini kit	10 - 20 µg	100 mg wet or 30 mg dry tissue	50 Tests	D5542-01
E.Z.N.A.® SP Fungal DNA Mini kit	10 - 20 µg	100 mg wet or 30 mg dry tissue	200 Tests	D5542-02
E.Z.N.A.® SP Fungal DNA Midi kit	50 - 200 µg	500 mg wet or 125 mg dry tissue	10 Tests	D5545-01
E.Z.N.A.® SP Fungal DNA Midi kit	50 - 200 µg	500 mg wet or 125 mg dry tissue	25 Tests	D5545-02

VWR.COM
TALKING YOUR LANGUAGE



The local website with global reach

Nucleic Acid Purification

Genomic DNA from Insect and Mollusc

E.Z.N.A.® Insect and Mollusc DNA kits

VWR by Omega bio-tek



The E.Z.N.A.® Insect DNA kit is designed for efficient recovery of genomic DNA up to 60 kb in size from insects, arthropods, roundworms, flatworms and invertebrates, as well as some plant tissue samples. The method is suitable for samples frozen or preserved in alcohol or DNE solution, and good results can be obtained with formalin preserved material. The E.Z.N.A.® Mollusc DNA kit is designed for purification of genomic DNA from molluscs, arthropods, round worms, flatworms and other invertebrate tissues rich in mucopolysaccharides. Fresh and frozen samples that have been preserved in alcohol or DNE can be used.

Insect

Description	Average yield	Binding capacity	Sample size	Pk	Cat. No.
E.Z.N.A.® Insect DNA Isolation kit	10 - 50 µg	Up to 60 kb fragments	30 mg tissue	50 Tests	D0926-01
E.Z.N.A.® Insect DNA Isolation kit	10 - 50 µg	Up to 60 kb fragments	30 mg tissue	200 Tests	D0926-02

Mollusc

Description	Average yield	Binding capacity	Sample size	Pk	Cat. No.
E.Z.N.A.® Mollusc DNA Isolation kit	10 - 50 µg	Up to 60 kb fragments	30 mg tissue	50 Tests	D3373-01
E.Z.N.A.® Mollusc DNA Isolation kit	10 - 50 µg	Up to 60 kb fragments	30 mg tissue	200 Tests	D3373-02

E-BUSINESS

More than just a webshop for all of your laboratory needs

Please visit us at: <http://eu.vwr.com/e-business>



**illustra™ GenomiPhi™ V2 DNA Amplification kit**

GE Healthcare



- Quick mini-scale genomic DNA preparation: 4 to 7 µg in 1,5 hours
- No DNA amplification in no-template controls
- One simple protocol for all different types of source material
- Representative amplification of the whole genome
- High quality DNA for PCR, restriction enzyme digestion, hybridisation, cloning, array CGH high throughput genotyping, and DNA archival

Description	Pk	Cat. No.
illustra™ GenomiPhi™ V2 DNA Amplification kit, 25 reactions	1 KIT	25-6600-30
illustra™ GenomiPhi™ V2 DNA Amplification kit, 100 reactions	1 KIT	25-6600-31
illustra™ GenomiPhi™ V2 DNA Amplification kit, 500 reactions	1 KIT	25-6600-32

DNA amplification kits, illustra™ GenomiPhi™ HY

GE Healthcare

- Midi-scale genomic DNA preparation (40 to 50 µg) from nanograms of source material
- Less hands-on time compared to traditional isolation methods
- Simple, automation-friendly protocol with great reproducibility
- Representative amplification of the whole genome
- High quality DNA for array CGH, high throughput genotyping, DNA archival, PCR, restriction enzyme digestion, hybridisation, and cloning

Description	Pk	Cat. No.
illustra™ Genomiphi™ HY kit, 25 reactions	1 KIT	25-6600-22
illustra™ Genomiphi™ HY kit, 100 reactions	1 KIT	25-6600-20
illustra™ Genomiphi™ HY kit, 1000 reactions	1 KIT	25-6600-25

INSTRUMENT SERVICE AND MAINTENANCE

Please contact your local VWR sales office for more information



Nucleic Acid Purification

RNA from Blood

E.Z.N.A.® Blood RNA kits

VWR by Omega bio-tek



The E.Z.N.A.® Blood RNA kits are designed for the isolation of total intracellular RNA from fresh, or frozen whole blood treated with any common anticoagulant such as heparin, EDTA or acid-citrate-dextrose. The procedure completely removes contaminants and enzyme inhibitors making total RNA isolation fast, convenient and reliable. E.Z.N.A.® PX Blood RNA kit is allows for isolation of total RNA from blood samples stored in special preserved reagents and Paxgene™ tubes.

Blood

Description	Average yield	Binding capacity	Binding property	Sample size	Pk	Cat. No.
E.Z.N.A.® Blood RNA kit	1 - 7 µg	100 µg RNA	mini spin columns	10 - 1000 µl	50 Tests	R6814-01
E.Z.N.A.® Blood RNA kit	1 - 7 µg	100 µg RNA	mini spin columns	10 - 1000 µl	200 Tests	R6814-02
E.Z.N.A.® Blood RNA kit	1 - 7 µg	100 µg RNA	mini spin columns	10 - 1000 µl	5 Tests	R6814-00
E.Z.N.A.® Blood RNA Midi kit	10 - 70 µg	1 mg	mini spin columns	Up to 10 ml	10 Tests	R6615-01
E.Z.N.A.® Blood RNA Midi kit	10 - 70 µg	1 mg	mini spin columns	Up to 10 ml	25 Tests	R6615-02
E.Z.N.A.® Blood RNA Maxi kit	50 - 350 µg	5 mg	maxi spin columns	Up to 50 ml	5 Tests	R6616-01
E.Z.N.A.® Blood RNA Maxi kit	50 - 350 µg	5 mg	maxi spin columns	Up to 50 ml	20 Tests	R6616-02
E.Z.N.A.® PX Blood RNA kit, 50 preps			Mini spin columns	1x PAXgene™ tube	1 KIT	R1057-01

RNA purification kits, PerfectPure™

5 PRIME

- Purify stable RNA in 20 minutes
- Fast and efficient process
- Complete kit, ready to use out of the box
- Purified RNA is suitable for any downstream application

Description	Sample size	Pk	Cat. No.
PerfectPure™ RNA Blood kit	0,05 - 3 ml whole blood and buffy coat	50 Tests	733-1073
PerfectPure™ RNA 96 Cell CS kit for eight 96-well RNA isolations using centrifugation	5 - 5 ⁶ cells	1 KIT	733-1086

THE CHEMICAL BRAND
FROM VWR INTERNATIONAL

VWR  **PROLABO** 

Order your free copy online at <http://eu.vwr.com/chemical>

E.Z.N.A.® miRNA Isolation kit

VWR by Omega bio-tek



The E.Z.N.A.® miRNA Isolation kit uses a rapid procedure to isolate small RNAs, such as micro RNA (miRNA), small interfering RNA (siRNA), and small nuclear RNA (smRNA), from a wide range of tissues and cells. The fast and efficient silica membrane-based method isolates total RNA ranging in size from kilo based down to 10mers. The kit also provides reagents and a procedure to enrich the population of RNAs that are 200 bases and smaller, which enhances the sensitivity of small RNA detection by solution hybridisation, Northern analysis, and other methods.



Description	Average yield	Binding capacity	Binding property	Elution volume	Sample size	Pk	Cat. No.
E.Z.N.A.® miRNA Isolation kit	50 µg	50 µg	mini spin columns		1×10 ⁷ cells or 50 mg tissue	50 Tests	R7034-01
E.Z.N.A.® miRNA Isolation kit	50 µg	50 µg	mini spin columns		1×10 ⁷ cells or 50 mg tissue	200 Tests	R7034-02

E.Z.N.A.® MagBind® miRNA kits

VWR by Omega bio-tek



By integrating the high capacity of Oligo (dT) magnetic particles with efficient protection of RNALock technology, the E.Z.N.A.® Mag-Bind® mRNA kit offers a fast and efficient method to directly purify mRNA from total RNA or cultured cells. The E.Z.N.A.® Mag-Bind® mRNA Enrichment kit contains Oligo(dT) magnetic particles and all the necessary reagents and buffers for isolation of pure poly A mRNA from total RNA preparations or clean-up of *in vitro* transcripts.



Description	Average yield	Binding property	Pk	Cat. No.
E.Z.N.A.® MagBind® mRNA kit	2 - 20 µg	oligo dT magnetic beads	10 Tests	R6570-01
E.Z.N.A.® MagBind® mRNA kit	2 - 20 µg	oligo dT magnetic beads	30 Tests	R6570-02
E.Z.N.A.® MagBind® mRNA Enrichment kit	2 - 20 µg	oligo dT magnetic beads	10 Tests	R6520-01
E.Z.N.A.® MagBind® mRNA Enrichment kit	2 - 20 µg	oligo dT magnetic beads	30 Tests	R6520-02

mRNA purification kits, illustra™ QuickPrep™

GE Healthcare

- Fast and easy to use with no need for intermediate isolation of total RNA
- Preserves the integrity of mRNA by utilising guanidine thiocyanate during crucial early stages of purification
- Utilises speed and selectivity of Oligo (dT)-Cellulose spin column chromatography
- Purifies high quality mRNA in yields suitable for direct use in cDNA synthesis and subsequent PCR, Northern blot hybridisation, and *in vitro* translation

Kit	QuickPrep™ Micro mRNA purification kit	QuickPrep™ mRNA purification kit
No. of purifications	24	4
Upper limit on starting sample size	0,1 g of tissue or 1×10 ⁷ cells	0,5 g of tissue or 5×10 ⁷ cells
Elapsed time per purification	15 min	<1 hr
Centrifuge required	Microcentrifuge	Table top centrifuge with swinging bucket rotor
Oligo (dT)-Cellulose spin columns	Prepared by user from slurry and empty MicroSpin™ columns provided	Provided as 4 prepacked Oligo (dT)-Cellulose spin columns
Extraction buffer, high and low salt buffers, elution buffer	One bottle of each for all 24 purifications	Individually packaged (4 vials each)
Glycogen solution, 2,5 M potassium acetate solution	One tube for all 24 purifications	Individually packaged (2 vials each)
Sample buffer	None	Individually packaged (2 vials each)
Instruction booklet	Complete protocols	Complete protocols

Description	Pk	Cat. No.
QuickPrep™ mRNA purification kit, 24 preps	1 KIT	27-9254-01
QuickPrep™ Micro mRNA purification kit, 4 preps	1 KIT	27-9255-01

illuстра™ mRNA purification kit

GE Healthcare

For rapid affinity purification of mRNA from eukaryotic total RNA using pre-packed oligo(dT)-cellulose spun columns.

- Purifies mRNA in 30 to 45 minutes from total RNA extracted from 25 mg to 1 g of cells or tissue
- Pre-dispensed reagents for each purification, which minimises the risk of nuclease contamination
- Produces mRNA ready for direct use (without precipitation) in procedures such as cDNA synthesis, PCR, Northern blot hybridisation and *in vitro* translation
- Compatible with total RNA isolated by any currently available method

Note: Not applicable for mRNAs without poly(A+) tails (e.g., bacteria).

Description	Pk	Cat. No.
illuстра mRNA Purification Kit, 2 purifications (4 columns)	1 KIT	27-9258-01
illuстра mRNA Purification Kit, 4 purifications (8 columns)	1 KIT	27-9258-02



VWR COLLECTION

Delivering High Quality & Superior Performance

Please contact your local VWR sales office or
go to www.vwr.com for the latest news and special offers



E.Z.N.A.® Total RNA kits

VWR by Omega bio-tek



E.Z.N.A.® Total RNA kits utilise column-based technology to isolate high quality total RNA suitable for a wide range of downstream applications.



Total RNA

Description	Average yield	Binding capacity	Binding property	Elution volume	Sample size	Pk	Cat. No.
E.Z.N.A.® MicroElute® Total RNA kit	1 - 30 µg	50 µg	mini spin columns	10 - 20 µl	1×10 ⁶ cells or 15 mg tissue	50 Tests	R6831-01
E.Z.N.A.® MicroElute® Total RNA kit	1 - 30 µg	50 µg	mini spin columns	10 - 20 µl	1×10 ⁶ cells or 15 mg tissue	200 Tests	R6831-02
E.Z.N.A.® Total RNA kit I	20-70 µg	100 µg	mini spin columns	40 - 70 µl	1×10 ⁷ cultured cells or 30 mg tissue	50 Tests	R6834-01
E.Z.N.A.® Total RNA kit I	20-70 µg	100 µg	mini spin columns	40 - 70 µl	1×10 ⁷ cultured cells or 30 mg tissue	200 Tests	R6834-02
E.Z.N.A.® Total RNA Midi kit	0,5 - 1 mg	1 mg	midi spin columns		1×10 ⁸ cells or 200 mg tissue	10 Tests	R6664-01
E.Z.N.A.® Total RNA Midi kit	0,5 - 1 mg	1 mg	midi spin columns		1×10 ⁸ cells or 200 mg tissue	25 Tests	R6664-02
E.Z.N.A.® Total RNA Maxi kit	1 - 5 mg	5 mg	maxi spin columns		5×10 ⁸ cells or 1g tissue	5 Tests	R6693-01
E.Z.N.A.® Total RNA Maxi kit	1 - 5 mg	5 mg	maxi spin columns		5×10 ⁸ cells or 1g tissue	20 Tests	R6693-02
E.Z.N.A.® HP Total RNA kit	20 - 70 µg	100 µg	mini spin columns		1×10 ⁷ cells or 30 mg tissue	50 Tests	R6812-01
E.Z.N.A.® HP Total RNA kit	20 - 70 µg	100 µg	mini spin columns		1×10 ⁷ cells or 30 mg tissue	200 Tests	R6812-02
E.Z.N.A.® Ultra-Pure Total RNA Maxi kit	1 - 5 mg		maxi spin columns		5×10 ⁸ cells or 1 g tissue	5 Tests	R6755-01
E.Z.N.A.® Ultra-Pure Total RNA Maxi kit	1 - 5 mg		maxi spin columns		5×10 ⁸ cells or 1 g tissue	20 Tests	R6755-02
E.Z.N.A.® Ultra-Pure Total RNA Midi kit	0,5 - 1 mg		midi spin columns		1×10 ⁸ cells or 500 mg tissue	10 Tests	R6754-01
E.Z.N.A.® Ultra-Pure Total RNA Midi kit	0,5 - 1 mg		midi spin columns		1×10 ⁸ cells or 500 mg tissue	25 Tests	R6754-02

RNA purification kits, PerfectPure™

5 PRIME

- Purify stable RNA in 20 minutes
- Fast and efficient process
- Complete kit, ready to use out of the box
- Purified RNA is suitable for any downstream application

Description	Sample size	Pk	Cat. No.
PerfectPure™ RNA Cultured Cell kit	10000 to 5×10 ⁷ cultured cells	10 Tests	733-1075
PerfectPure™ RNA Cultured Cell kit	10000 to 5×10 ⁷ cultured cells	50 Tests	733-1076
PerfectPure™ RNA Cultured Cell kit	10000 to 5×10 ⁷ cultured cells	250 Tests	733-1077
PerfectPure™ RNA Tissue kit	0,5 - 40 mg tissue per column	10 Tests	733-1078
PerfectPure™ RNA Tissue kit	0,5 - 40 mg tissue per column	50 Tests	733-1079
PerfectPure™ RNA Tissue kit	0,5 - 40 mg tissue per column	250 Tests	733-1080
PerfectPure™ RNA Cultured Cell base kit	-	250 ml	733-1773

illuстра™ RNAspin Mini isolation kit

GE Healthcare

- High quality output RNA from diverse sample types; suitable for use in sensitive downstream applications
- Recovers high quality total RNA due to the removal of genomic DNA through on-column DNase I treatment
- For maximum yield and purity, prefilters are included to reduce lysate viscosity
- Results can be obtained with even small amounts of precious sample (e.g. >10 HeLa cells for RT-PCR); lysis buffer less susceptible to foaming to ensure valuable RNA sample is not wasted

Delivery information: The kit is supplied with a full protocol booklet with a detachable, quick reference protocol card, and all the necessary components including prefilters and DNase I.

Description	Pk	Cat. No.
illuстра™ RNAspin Mini isolation kit, 20 preps	20 Tests	25-0500-70
illuстра™ RNAspin Mini isolation kit, 50 preps	50 Tests	25-0500-71
illuстра™ RNAspin Mini isolation kit, 250 preps	250 Tests	25-0500-72

illuстра™ RNAspin Midi isolation kit

GE Healthcare



The illuстра™ RNAspin Midi isolation kit can be used to isolate total RNA from cultured cells, tissue, bacteria, and yeast. The procedure takes less than 30 minutes to complete. The isolated RNA is of sufficient quantity (up to 700 µg) and quality for downstream applications, including Northern blot analysis, quantitative reverse transcription polymerase chain reaction (qRT-PCR), primer extension or RNase protection assays.

- High quality output RNA from diverse sample types and it is suitable for use in sensitive downstream applications
- Scalable input and output
- High quality total RNA due to the removal of genomic DNA through on-column DNase I treatment
- Prefilters included to remove lysate viscosity- increases yield and purity with input tissues such as bacteria and yeast

Sample type	Animal tissue	Cell culture
Sample size	up to 200 mg tissue	up to 5×10^7 cells
Average yield	up to 700 µg	up to 700 µg
Elution volume	500 µl	500 µl
Binding capacity	700 µg	700 µg
RNA purity (A260/A280)	1,8 - 2,2	1,8 - 2,2
RNA quality (RIN)	≥ 7	≥ 7
Time/preparation	80 min/4 preps	80 min/4 preps

Delivery information: The kit is supplied with a full protocol booklet with a detachable, quick reference protocol and all the necessary components including prefilters and DNase I.

Description	Pk	Cat. No.
illuстра™ RNAspin Midi isolation kit, 20 preps	20 Tests	25-0500-73



E.Z.N.A.® Fatty tissue RNA kits

VWR by Omega bio-tek



E.Z.N.A.® Total RNA kit is designed for isolating total cellular RNA from tissues rich fibrous and fatty tissues such as skeletal muscle, heart, brain and adipose tissues.



Fatty tissue

	Average yield	Binding capacity	Binding property	Pk	Cat. No.
E.Z.N.A.® Total RNA kit II	30 - 90 µg	100 µg	mini spin columns	50 Tests	R6934-01
E.Z.N.A.® Total RNA kit II	30 - 90 µg	100 µg	mini spin columns	200 Tests	R6934-02

VWR.COM
TALKING YOUR LANGUAGE

E.Z.N.A.® Fibrous tissue RNA kits

VWR by Omega bio-tek



E.Z.N.A.® Tissue RNA kit provides a rapid and easy method for the isolation of total RNA from difficult-to-lyse animal tissue samples including skeletal muscle, heart, and connective tissues.



Description	Average yield	Binding capacity	Sample size	Pk	Cat. No.
E.Z.N.A.® Tissue RNA kit	10 - 30 µg	100 µg	30 mg tissue	50 Tests	R6688-01
E.Z.N.A.® Tissue RNA kit	10 - 30 µg	100 µg	30 mg tissue	200 Tests	R6688-02

RNA purification kits, PerfectPure™

5 PRIME

- Purify stable RNA in 20 minutes
- Fast and efficient process
- Complete kit, ready to use out of the box
- Purified RNA is suitable for any downstream application

Description	Sample size	Pk	Cat. No.
PerfectPure™ RNA Fibrous Tissue kit	0,5 - 40 mg fibrous tissue per column	50 Tests	733-1082

**PIPETTE CALIBRATION
AT VWR INTERNATIONAL**

**VWR
PIPET SERVICES™**

All brands and all models
calibrated by certified technicians.

E.Z.N.A.® RNA-Solv® reagents

VWR by Omega bio-tek



RNA-Solv® reagent is a one-reagent system for the isolation of total RNA from cells and tissues. This solution-based method can be easily scaled up or down.



Description	Pk	Cat. No.
E.Z.N.A.® RNA-Solv® reagent	100 ml	R6830-01IN
E.Z.N.A.® RNA-Solv® reagent	200 ml	R6830-02IN

RNA extraction reagent, RiboZol™

RiboZol™ RNA extraction reagent is optimised to produce high quality RNA from a variety of biological samples. RiboZol™ is a ready to use, single phase phenol solution for the isolation of total RNA from even the most difficult cell and tissue types. The sample is lysed directly in RiboZol™ to inhibit RNase activity and prevent RNA degradation during purification. RNA obtained by the RiboZol™ purification procedure is compatible with a variety of downstream applications.

- Isolate intact total RNA from even the most difficult of cells and tissues types
- Extract total RNA in less than an hour
- Achieve consistent results and excellent recovery of small RNAs
- Compatible with a variety of applications including Northern analysis, dot blots, cloning, in vitro translation, poly (A+) selection and RT-PCR

Description	Pk	Cat. No.
RNA extraction reagent, RiboZol™	100 ml	N580-100ML
RNA extraction reagent, RiboZol™	200 ml	N580-200ML

RNA purification kit, RiboZol™ Plus

RiboZol™ Plus RNA purification kit purifies and recovers all sizes and species of RNA, including large RNAs such as ribosomal RNA (rRNA) or messenger RNA (mRNA), and small RNAs <200 nucleotides, including microRNAs (miRNA) and small inhibitory RNAs (siRNA). The kit combines the benefits of organic RNA extraction using RiboZol™ RNA extraction reagent with the ease and convenience of spin column technology. Firstly, RiboZol™ RNA extraction reagent extracts total RNA from cells or tissue, including difficult sample types. Subsequent column chromatography employs a proprietary resin as the separation matrix to yield up to 35 µg of highly purified total RNA.

- Save time
- Enhance recovery of total RNA including microRNA species

Description	Pk	Cat. No.
RiboZol™ Plus RNA purification kit	1 KIT	N643-KIT

Isol-RNA Lysis Reagent™**5 PRIME**

The phenol/guanidine-based Isol-RNA Lysis Reagent™ is optimised for lysis of a variety of tissues types before RNA isolation with standard homogenisation methods and alcohol precipitation. The combination of tissue lysis with Isol-RNA Lysis Reagent and organic extraction aided by Phase Lock Gel™ is the method of choice for RNA purification from tissues with high fat content like brain, breast or adipose tissue. The combination of organic extraction and chaotropic disruption contributes to efficient lysis for high yields of total RNA.

- Easy to follow protocol for lysis and homogenisation
- High yields of RNA, even from difficult tissues
- Optimised lysis conditions for a wide variety of tissue types and cells
- Compatible with Phase Lock Gel™ Heavy

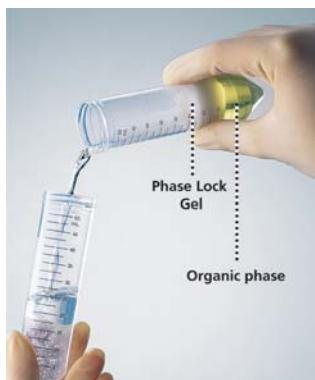
Description	Pk	Cat. No.
Isol-RNA Lysis Reagent™, 200 ml	200 ml	733-1089

Nucleic Acid Purification

Total RNA Reagents

Phase Lock Gel™

5 PRIME



Phase Lock Gel (PLG) eliminates interphase-protein contamination during phenol extraction and ensures faster results with improved recoveries. PLG migrates to form a tight seal between the phases of an aqueous/organic extraction during centrifugation. The organic phase and the interphase materials are effectively trapped in or below the barrier, thus enabling complete and easy decanting or pipetting of the entire aqueous phase. The benefits are increased yields of up to 30%, increased protection from exposure to hazardous compounds, and no risk of interphase sample contamination. For convenience, PLG is provided pre dispensed into standard centrifuge tubes of various sizes.

PLG is available in two different density formulations – Heavy and Light – and it can be used in virtually any protocol that calls for extraction with phenol and/or chloroform, simply by selecting the formulation suitable for the organic and the aqueous phases.

PLG Heavy	Aqueous phase	High density sample (for example, high salt content)
	Organic phase	Standard mixtures of phenol, chloroform, isoamyl alcohol with a chloroform fraction of at least 60% (Phenol as the sole organic solvent is not compatible with PLG Heavy)
PLG Light	Aqueous phase	Low-density sample
	Organic phase	Standard mixtures of phenol, chloroform, isoamyl alcohol

Sample material	PLG type recommended
Genomic DNA from mouse tails	Use PLG Heavy to enhance isolation using a standard proteinase K/SDS organic extraction protocol
Plasmid DNA isolation	Use PLG Heavy to enhance isolation using standard alkaline lysis/phenol extraction procedures
Total RNA isolation	Use PLG Heavy to enhance isolation from cells and tissues using a modified guanidinium isothiocyanate/acid phenol method
Genomic DNA isolation	Use PLG Light to enhance isolation using standard proteinase K/SDS procedures
DNA isolation from agarose gels	Use PLG Light to enhance isolation of DNA fragments using phenol extraction procedures
Lambda Phage or M13 DNA isolation	Use PLG Light to enhance isolation of bacteriophage DNA using standard purification protocols

- Yield of nucleic acids increased by up to 30% compared to conventional organic extraction
- Eliminates interphase contamination of nucleic acid solution
- Stable gel barrier allows easy sample decanting
- Reduced contact with hazardous organic solvents

Description	Pk	Cat. No.
Phase Lock Gel Light		
Tube size 1,5 ml for 100 - 500 µl sample size, 200 tubes	200	713-2533
Tube size 2,0 ml for 100 - 750 µl sample size, 200 tubes	200	713-2535
Tube size 15 ml for 1 - 6 ml sample size, 100 tubes	100	713-2537
Tube size 50 ml for 5 - 20 ml sample size, 25 tubes	25	713-2539
Phase Lock Gel Heavy		
Tube size 2,0 ml for 100 - 750 µl sample size, 200 tubes	200	713-2536
Tube size 15 ml for 1 - 6 ml sample size, 100 tubes	100	713-2538
Tube size 50 ml for 5 - 20 ml sample size, 25 tubes	25	713-2540
Tube size 1,5 ml for 100 - 500 µl sample size, 200 tubes	200	713-2534

**E.Z.N.A.® RNA- Lock stabiliser reagent**

VWR by Omega bio-tek



E.Z.N.A.® RNALock stabiliser reagent rapidly lyses cells and tissues to inactivate RNases at room temperature



Description	Pk	Cat. No.
E.Z.N.A.® RNALock stabiliser reagent	50 ml	R0424-01
E.Z.N.A.® RNALock stabiliser reagent	250 ml	R0424-02

RNase-free DNase set**5 PRIME**

The RNase-free DNase set is quality-controlled for DNase digestion of DNA in solution or on column before RNA clean-up. The RNase-free DNase kit can be combined with all PerfectPure™ RNA kits or used for protocols developed by customers in-house.

- Efficient digest of DNA in solution or on columns
- Complete DNase removal by subsequent washes
- Guaranteed RNase-free
- Stable, lyophilised enzyme

Activity: 2500 Kunitz units / mg

Delivery information: Kit contains DNase I; RNase-free lyophilised DNase digestion buffer, 2×2 ml; and RNase-free water, 1.5 ml.

Description	Pk	Cat. No.
RNase-free DNase set, 50 reactions	50 Tests	733-1093

E-BUSINESS

More than just a webshop for all of your laboratory needs

Please visit us at: <http://eu.vwr.com/e-business>

Nucleic Acid Purification

PCR Clean Up

PCR clean-up kits, E.Z.N.A.® and E-Z 96®

VWR by Omega bio-tek



E.Z.N.A.® Cycle Pure kits are designed for the rapid purification of single or double stranded DNA from PCR or other enzymatic reactions. The purification procedure completely removes primers, nucleotides enzymes, salts, and other impurities from DNA sample. E.Z.N.A.® MicroElute Cycle Pure kits are specifically intended to purify PCR samples with a small elution volume of 10 to 15 µl. The E-Z® 96 Cycle Pure kit procedure allows for the parallel purification of up to 96 PCR samples from multiple amplifications. The E-Z® 96 Cycle Pure kit utilises multiwell technology for manual or fully automated high throughput purification.



Description	Binding capacity	Elution volume	Recovery	Yield	Pk	Cat. No.
E.Z.N.A.® Cycle Pure kit (V-Spin column)	25 µg	30 - 50 µl	85%	100 bp - 20 kb	50 Tests	D6492-01
E.Z.N.A.® Cycle Pure kit (V-Spin column)	25 µg	30 - 50 µl	85%	100 bp - 20 kb	200 Tests	D6492-02
E.Z.N.A.® Cycle Pure kit (Q-spin)	25 µg	30 - 50 µl	85%	100 bp - 20 kb	50 Tests	D6493-01
E.Z.N.A.® Cycle Pure kit (Q-spin)	25 µg	30 - 50 µl	85%	100 bp - 20 kb	200 Tests	D6493-02
E.Z.N.A.® MicroElute Cycle Pure kit	10 µg	10 - 15 µl	85%	100 bp - 20 kb	50 Tests	D6293-01
E.Z.N.A.® MicroElute Cycle Pure kit	10 µg	10 - 15 µl	85%	100 bp - 20 kb	200 Tests	D6293-02
E-Z 96® Cycle Pure kit (1×96)	25 µg	80 - 100 µl	85%	100 bp - 20 kb	1 KIT	D1043-01
E-Z 96® Cycle Pure kit (5×96)	25 µg	80 - 100 µl	85%	100 bp - 20 kb	1 KIT	D1043-02
E-Z 96® Cycle Pure kit (24×96)	25 µg	80 - 100 µl	85%	100 bp - 20 kb	1 KIT	D1043-03

PCRExtract Mini kit

5 PRIME

For efficient extraction of PCR fragments from solutions.

- Simple bind, wash, elute procedure takes just 15 minutes
- Up to 95% recovery of ready to use, pure DNA
- Successfully purify DNA fragments from 100 bp to 10 kb from enzymatic reactions

Description	Pk	Cat. No.
PCRExtract Mini kit, 50 preps	50 Tests	733-2071
PCRExtract Mini kit, 200 preps	200 Tests	733-2072

PCR purification kit, illustra™ GFX™ 96

GE Healthcare

- For the purification of up to 96 PCR products (0.1 to 10 kb) simultaneously in as little as 15 minutes
- High yields of pure DNA recovered in a small volume of water or a low-ionic strength buffer
- Typical recoveries are >85% for PCR products 100 bp to 10 kb in length; salt removal typically >99%
- Avoids ethanol precipitations and hazardous organic extractions

Description	Pk	Cat. No.
illustra™ PCR GFX™ 96 kit, 10×96-well plates	1 KIT	28-9034-45

illustra™ GFX™ PCR DNA and gel band purification kit

GE Healthcare

- Fast and easy to use method with less than 10 min hands-on time
- Flexible 10 to 50 µl elution volume for different DNA concentration needs
- Improved column design with increased maximum volume holding of up to 800 µl liquid volume (950 µl without a cap)
- Highly pure DNA is ready for direct use in sequencing, PCR, labelling, restriction enzyme digestion, and cloning

Description	Pk	Cat. No.
illustra™ GFX™ PCR DNA and gel band purification kit, 100 purifications	1 KIT	28-9034-70
illustra™ GFX™ PCR DNA and gel band purification kit, 250 purifications	1 KIT	28-9034-71



PCR and sequence reaction clean-up kits, illustra™ ExoStar™ 1-STEP GE Healthcare

illustra™ ExoStar™ 1-STEP kit uses illustra™ exonuclease I and alkaline phosphatase for optimal removal of unincorporated primers and nucleotides. illustra™ ExoStar™ improves digestion efficiency with no degradation of the target PCR product. The sample remains completely intact and ready for immediate use in manual or automated processes.

- Both enzymes provided in one tube with just one simple pipetting step needed to prepare the reaction
- Fast 30 minute protocol
- Adaptable to different sizes
- Scalable for different reaction sizes
- No loss of PCR product
- Easy to automate
- Complete heat inactivation of the enzymes within 15 minutes

Description	Pk	Cat. No.
illustra™ ExoStar™ 1-STEP kit	100 Tests	US77702
illustra™ ExoStar™ 1-STEP kit	500 Tests	US77705
illustra™ ExoStar™ 1-STEP kit	2.000 Tests	US77720
illustra™ ExoStar™ 1-STEP kit	5.000 Tests	US77750

**THE CHEMICAL BRAND
FROM VWR INTERNATIONAL**

VWR BDH
PROLABO®

Order your free copy online at <http://eu.vwr.com/chemical>



E.Z.N.A.® Gel Extraction kits

VWR by Omega bio-tek



Gel purification of DNA is a common technique used for the isolation of specific DNA fragments from reaction mixtures. However, most methods either fail to completely remove agarose (which can lead to problems in downstream manipulations), shear the DNA, or results in very low yields. The E.Z.N.A.® Gel Extraction kit uses HiBind DNA spin-column technology to recover DNA bands 70 bp to 20 kb in length from all grades of agarose gel with yields up to 85%. The E.Z.N.A.® MicroElute Gel Extraction kit is designed for purification of DNA fragments from agarose gels with a small elution volume of 10 to 15 µl. The E.Z.N.A.® Ultra-Sep® Gel Extraction kit offers an economical option for the recovery of DNA from agarose gel using glass beads.

Description	Elution volume	Recovery	Yield	Pk	Cat. No.
E.Z.N.A.® Gel Extraction kit (V-Spin column)	25 µg	85%	70 bp - 20 kb	50 Tests	D2500-01
E.Z.N.A.® Gel Extraction kit (V-Spin column)	25 µg	85%	70 bp - 20 kb	200 Tests	D2500-02
E.Z.N.A.® MicroElute Gel Extraction kit	10 µg	80%	70 bp - 20 kb	50 Tests	D6294-01
E.Z.N.A.® MicroElute Gel Extraction kit	10 µg	80%	70 bp - 20 kb	200 Tests	D6294-02
E.Z.N.A.® Ultra-Sep® Gel Extraction kit	-	80%	60 bp - 50 kb	150 Tests	D2510-01
E.Z.N.A.® Ultra-Sep® Gel Extraction kit	-	80%	60 bp - 50 kb	500 Tests	D2510-02

Agarose GelExtract Mini kit

5 PRIME

The Agarose GelExtract Mini kit provides rapid DNA clean up from agarose gel.

- Purify DNA fragments from 70 bp to 10 kb for agarose gels
- Up to 95% recovery of ready to use, pure DNA
- Fast procedure in <30 minutes

Description	Pk	Cat. No.
Agarose GelExtract Mini kit, 50 preps	50 Tests	733-1988
Agarose GelExtract Mini kit, 200 preps	200 Tests	733-1989

DNA extraction kit, GelElute

5 PRIME

For batch purification of DNA fragments from agarose gels and solutions.

- Convenient extraction of DNA from 40 bp to 50 kb
- Gel extraction from agarose and polyacrylamide gels
- No sodium iodide to interfere with subsequent reactions

Description	Pk	Cat. No.
DNA extraction kit, GelElute	150 Tests	733-1010

SafeXtractor

5 PRIME



- Safe - completely replaces the use of hazardous blades
- Minimises UV exposure and cross-linking of DNA
- Eliminates cross-contamination
- Single hand operation for quick and easy use
- Uniform gel slices every time

Description	Pk	Cat. No.
SafeXtractor tool	25	733-2073
SafeXtractor tool	100	733-1791

E.Z.N.A.® MicroElute DNA/RNA Clean-Up kits

VWR by Omega bio-tek



E.Z.N.A.® MicroElute Clean-Up kits are designed to purify DNA fragments, or recover and concentrate RNA, from enzymatic reactions with a low elution volume of 10 to 15 µl. Using lower elution volumes makes these kits well suited for downstream applications that require a highly concentrated DNA or RNA sample.

**DNA clean up**

Description	Elution volume	Recovery	Yield	Pk	Cat. No.
E.Z.N.A.® MicroElute® DNA Clean-Up kit	10 - 15 µl	85%	100 bp - 10 kb	50 Tests	D6296-01
E.Z.N.A.® MicroElute® DNA Clean-Up kit	10 - 15 µl	85%	100 bp - 10 kb	200 Tests	D6296-02

RNA clean up

Description	Binding capacity	Elution volume	Recovery	Pk	Cat. No.
E.Z.N.A.® MicroElute® RNA Clean Up kit	10 µg	10 - 15 µl	85 - 90%	50 Tests	R6247-01
E.Z.N.A.® MicroElute® RNA Clean Up kit	10 µg	10 - 15 µl	85 - 90%	200 Tests	R6247-02

E.Z.N.A.® DNA/RNA Probe Purification kits

VWR by Omega bio-tek



The E.Z.N.A.® DNA (or RNA) Probe Purification kit allows for the rapid and convenient recovery of up to either 20 µg DNA from random-primer or nick labelling reactions (DNA Probe Purification kit) or 50 µg RNA from any labelling reaction (RNA Probe Purification kit). These kits can also be used for general DNA/RNA clean up, whereas other methods may lead to nuclease contamination or loss of samples.

DNA probe purification

Description	Elution volume	Recovery	Yield	Pk	Cat. No.
E.Z.N.A.® DNA Probe Purification kit	30 µg	30 - 50 µl	85%	50 Tests	D6538-01
E.Z.N.A.® DNA Probe Purification kit	30 µg	30 - 50 µl	85%	200 Tests	D6538-02

RNA probe purification

Description	Recovery	Yield	Pk	Cat. No.
E.Z.N.A.® RNA Probe Purification kit	85 - 90%	50 µg RNA	50 Tests	R6249-01
E.Z.N.A.® RNA Probe Purification kit	85 - 90%	50 µg RNA	200 Tests	R6249-02

illuстра™ ProbeQuant™ G-50 micro columns

GE Healthcare

- Prepacked for convenience with Sephadex™ G-50 DNA Grade and pre-equilibrated in STE containing 0,15% Kathon CG/ICP Biocide
- Ready to use - requires less than 4 min from sample application to collection of purified product
- Designed for use in a microcentrifuge
- Tested in nickase, single and double-stranded exonuclease and RNase assays

Description	Pk	Cat. No.
illuстра™ ProbeQuant™ G-50 Micro Columns	50	28-9034-08

illuстра™ MicroSpin™ G-25 columns

GE Healthcare

For rapid buffer exchange/desalting of PCR products and other DNAs in a volume of 10 to 100 µl using spin column chromatography.

- Prepacked with Sephadex™ G-25 DNA Grade and pre-equilibrated in distilled water containing 0,05% Kathon CG/ICP Biocide
- Ready to use: requires less than 4 minutes from sample application to collection of purified product
- Tested in nickase, single and double-stranded exonuclease and RNase assays
- Can also be used for desalting/buffer exchange of DNA and removal of unincorporated radionucleotides from end-labelled oligonucleotides (at least 10 bases in length) in a volume of 10 to 100 µl

Description	Pk	Cat. No.
illuстра™ MicroSpin™ G-25 columns	50	27-5325-01

Nucleic Acid Purification

Dye Terminator Removal

Ultra-Sep® Dye Terminator Removal kits

VWR by Omega bio-tek



Ultra-Sep® Dye Terminator Removal kits are designed for efficient and reliable removal of unincorporated terminators from sequencing reactions. Kits are available based on either E.Z.N.A.® single spin or E.Z.96® multiwell plate formats.



Description	Elution volume	Pk	Cat. No.
E.Z.N.A.® Ultra-Sep® Dye Terminator Removal kit	15 - 20 µl	50 Tests	S5912-01
E.Z.N.A.® Ultra-Sep® Dye Terminator Removal kit	15 - 20 µl	200 Tests	S5912-02
E-Z 96® Ultra-Sep® Dye Terminator Removal kit (4×96)		1 KIT	S9513-01
E-Z 96® Ultra-Sep® Dye Terminator Removal kit (24×96)		1 KIT	S9513-02

illustra™ AutoSeq™ G-50 columns

GE Healthcare

illustra™ AutoSeq™ G-50 columns are specifically designed to remove fluorescent dye-terminators from sequencing reactions prior to analysis on automated sequencers. Effective purification is essential for high quality sequencing results since residual dye-terminators can obscure data. illustra™ AutoSeq™ G-50 consists of MicroSpin™ columns containing Sephadex™ G-50, pre-equilibrated in double-distilled water. This is important because even the small amount of salt in traditional buffers (such as TE buffer) can cause electrophoretic artifacts on salt-sensitive automated sequencers.

- Columns are prepacked with Sephadex™ G-50 DNA Grade F and pre-equilibrated in double-distilled water with 0,05% Kathon CG/ICP Biocide added as a preservative
- Ready to use, enabling sample application to collection of purified product in less than 4 minutes

Description	Pk	Cat. No.
illustra AutoSeq™ G-50 columns	250	27-5340-02

DNA clean up, illustra™ CyScribe™ GFX™ purification kit

GE Healthcare

illustra™ CyScribe™ GFX™ purification kit has been specifically developed for the purification of CyDye™ labelled cDNA probes. It can be used in conjunction with CyScribe™ microarray labelling kits for either direct incorporation of Cy3- and Cy5-labelled dNTPs or for post-labelling of cDNA with Cy3 and Cy5 monoreactive dyes.

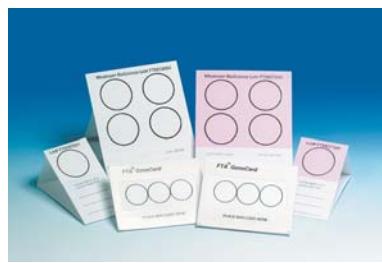
- Provides efficient removal of unincorporated CyDye™ label and primers from labelling reactions with outstanding yields of labelled cDNA probe
- Excellent for the purification of cDNA labelled by either direct incorporation or by post-labelling using CyScribe™ labelling kits

Description	Pk	Cat. No.
illustra™ CyScribe™ GFX™ purification kit, 25 purifications	1 KIT	27-9606-01
illustra™ CyScribe™ GFX™ purification kit, 50 purifications	1 KIT	27-9606-02



FTA® Cards

Whatman (part of GE Healthcare)



For the collection, transport, archiving and isolation of nucleic acids at room temperature

FTA® Cards contain chemicals that lyse cells, denature proteins and protect nucleic acids from nucleases, oxidation and UV damage. The cards rapidly inactivate organisms, including blood-borne pathogens, and prevent the growth of bacteria and other microorganisms. FTA® Cards are available in a variety of configurations. Applications include forensics, transgenics, transfusion medicine, plasmid screening, drug discovery and genomics.

FTA® Classic Card: Four sample areas for application of up to 500 µl whole blood or 100 µl plant homogenate per card. Convenient for multiple applications of the same specimen or for collection of multiple animal or plant samples on one card.

FTA® Mini Card: Two sample areas for application of up to 250 µl whole blood or 50 µl plant homogenate per card. Convenient for protocols that require different locations for testing and archiving of samples.

FTA® Micro Card: One sample area for application of up to 125 µl whole blood or 25 µl plant homogenate per card. Recommended when only one sample is needed.

FTA® Gene Card: Enclosed in a rigid card frame. Three sample areas for application of up to 225 µl whole blood or 30 µl plant homogenate per card.

Indicating FTA® Cards: Same as standard card but with a colour indicator that changes from pink to white when sample is applied. Recommended for use with colourless samples, such as buccal or cultured cells.

- Nucleic acids are captured, immobilised, and stabilised for storage, all in one easy step
- Captured nucleic acid is ready for downstream applications in less than 30 minutes
- Nucleic acids collected on FTA® Cards remain stable for years at room temperature
- Indication FTA® Cards change colour upon sample application to facilitate handling of colourless samples

Description	Pk	Cat. No.
FTA® Cards		
FTA® Classic Card	25	512-1160
FTA® Classic Card	100	512-1079
FTA® Gene Card	25	733-1750
FTA® Gene Card	100	730-1358
FTA® Micro Card	25	512-1162
FTA® Micro Card	100	730-1359
FTA® Mini Card	25	730-1360
FTA® Mini Card	100	512-1077
Indicating FTA® Cards		
Indicating FTA® Classic Card	25	512-1161
Indicating FTA® Classic Card	100	730-1361
Indicating FTA® Micro Card	25	512-1163
Indicating FTA® Micro Card	100	512-1082
Indicating FTA® Mini Card	25	730-1362
Indicating FTA® Mini Card	100	512-1078
PlantSaver® FTA® Cards		
PlantSaver® FTA® Card	25	512-1164
PlantSaver® FTA® Card	1.000	512-0024
FTA® kits		
FTA® kit containing 25 FTA® Micro Cards, 50 ml FTA® purification reagent, 2x Harris Uni-Core punches with cutting mat, instructions	1 KIT	512-0007
FTA® Plant kit containing 20 FTA® PlantSaver® Cards, 50 ml FTA® purification reagent, 2,0 mm Harris Uni-Core punch with cutting mat, U-bottom test tube for sample crushing, instructions	1 KIT	WHATWB120068
Accessories		
Description	Pk	Cat. No.
FTA® Gene Card tray	20	730-1363

Nucleic Acid Purification

DNA Storage

FTA® Elute Cards

Whatman (part of GE Healthcare)



FTA® Elute Cards utilise Whatman FTA® technology that simplifies the handling and processing of nucleic acids. DNA is eluted in an easy step, providing with DNA in solution ready for amplification.

The FTA® Elute matrix is chemically treated with proprietary reagents that lyse cells upon contact causing the release of nucleic acids. DNA is recovered from the FTA® Elute matrix through a simplified elution process using water and heat. Inhibitory components, such as hemoglobin, are retained on the FTA Elute matrix.

The Indicating FTA® Elute matrix is the same chemistry as FTA® Elute with an indicating dye that changes from purple to white upon application of a colourless sample such as saliva, urine, buccal cell swabs and cultured cells.

- Samples can be collected, shipped, and preserved at room temperature, eliminating the high costs associated with shipping samples on ice and with laboratory freezer storage
- Sample processing time to isolate DNA is 15 to 30 minutes, avoiding the need for lengthy and multiple step isolation procedures
- Sample processing requires a simple hot water elution procedure to isolate DNA eliminating the cost of using a purification kit
- Sample volume requirements are minimal: 12 to 40 µl per collection area, avoiding large blood volume handling/processing
- Haemoglobin, a known PCR inhibitor, is bound to the FTA® Elute matrix - DNA is recovered in solution free of PCR inhibitors

Description	Pk	Cat. No.
FTA® Elute Micro Card, 4 sample areas per card	25	730-1364
FTA® Elute Micro Card, 4 sample areas per card	100	512-0527
Indicating FTA® Elute Micro Card, 1 sample area per card	25	730-1366
Indicating FTA® Elute Micro Card, 1 sample area per card	100	730-1365

FTA® reagent and accessories

Whatman (part of GE Healthcare)



512-1154



512-1152



733-1751



710-0527

For collection, storage, processing and shipping FTA® Cards

FTA® purification reagent

For purification of nucleic acids stored on FTA® Cards.

- Ensures superior quality DNA for PCR or SNP analysis
- Removes heme, PCR inhibitors and other potential contaminants
- Non toxic, hypoallergenic, aqueous solution

Harris micro punches (1,2 mm or 2,0 mm) and cutting mat

Recommended for the precise punching of FTA® Cards. No sample carryover when recommended procedures are used. Tips provide up to 2000 punches. Polished steel tip is case hardened and can be sterilised. The cutting mat ensures clean sample cuts and extends the life of the cutting tip.

- 1,2 mm punch recommended for use with FTA® Cards containing whole blood and samples with high DNA content
- 2,0 mm punch recommended for use with FTA® Cards containing buccal cells, plasmids and other samples with DNA content

Sterile foam tipped applicator

For the collection of saliva and buccal cells.

- Non abrasive foam head is the same size as sample area on indicating FTA® Cards to facilitate sample application

Sterile Omni swab

Non invasive device for collecting saliva and cheek buccal cells.

- Brush-like swab head easily ejects from the stem of the swab for transfer of samples into tubes or multiwell plates
- Pre-sterilised and individually wrapped for single use

**Multi-barrier pouches**

For storing and transporting FTA® Cards.

- Seven laminated layers protect the card from exposure to gas or liquid contamination
- Tamper-evident seal maintains sample security
- Outer paper surface for labelling or writing

Description	Pk	Cat. No.
FTA® purification reagent	500 ml	512-1154
Harris micro punch, 1,2 mm, with cutting mat	1	512-1152
Harris micro punch, 2,0 mm, with cutting mat	1	512-1156
Multi-barrier pouch, small (80×70 mm)	100	733-1751
Multi-barrier pouch, large (90×150 mm)	100	733-1752
Replacement tip, 1,2 mm	1	512-1063
Replacement cutting mat	1	512-1069
Replacement tip, 2,0 mm	1	512-1064
Sterile foam tipped applicators	100	512-0020
Sterile Omni swab	100	710-0527
Blood stain cards	100	512-1150

CloneSaver™ Cards

Whatman (part of GE Healthcare)

**FTA® technology in 96-well format for high throughput applications**

Designed for the collection, long-term storage and purification of plasmid and BAC DNA from bacterial clones in a 96-well format. Bacterial cultures, resuspended colonies or glycerol stock are applied, cells are lysed, and plasmid or BAC DNA is stabilised for long-term storage or immediate processing.

- Bacteriophages are inactivated
- DNA is easily accessible for downstream applications, such as transformation, PCR or sequencing
- Up to 96 samples can be stored on each card

Description	Pk	Cat. No.
CloneSaver™ Cards	5	512-1149
CloneSaver™ resealable multi-barrier pouch	50	512-1070

VWR COLLECTION

Delivering High Quality & Superior Performance

Please contact your local VWR sales office or
go to www.vwr.com for the latest news and special offers

pure flexibility

You shouldn't have to choose between purity and flexibility. Sensitivity and productivity. Throughput and consistency. The Thermo Scientific KingFisher nucleic acid purification family lets you have it all. Instruments, software, kits and consumables deliver unparalleled workflow performance. Use a wide variety of starting materials. Get started quickly with ready-made protocols or create your own for limitless applications.

unparalleled performance

• Meet the whole family at thermoscientific.com/kingfisher



KingFisher Flex
flexible high-throughput system



KingFisher Duo
versatile medium-throughput system



KingFisher mL
economical small scale system

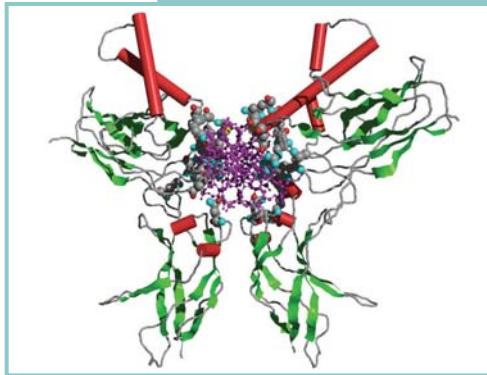


KingFisher DNA/RNA Kits
optimized high-performance
purification kits



DNA/RNA Modifying Enzymes

40



Modifying Enzymes

Modifying Enzymes

DNA/RNA Modifying Enzymes

Enzymes

AppliChem

Description	Pk	Cat. No.
DNA polymerase I, Klenow fragment from <i>E. coli</i>	200 EU	A5217.0200
DNA polymerase I, Klenow fragment from <i>E. coli</i>	1.000 EU	A5217.1000
Exonuclease III	4.000 EU	A5205.4000
Exonuclease III	20 KU	A5205.20000
Nuclease, <i>Micrococcus</i>	1 mg	A3823.0001
Nuclease, <i>Micrococcus</i>	5 mg	A3823.0005
Phosphatase, alkaline bacterial (BAP)	1 mg	A3827.0001
Phosphatase, alkaline bacterial (BAP)	5 mg	A3827.0005
Phosphatase, alkaline bacterial (BAP)	25 mg	A3827.0025
Phosphatase, alkaline from calf intestine (CIP) Grade I	1 g	A3907.0001
Phosphatase, alkaline from calf intestine (CIP) Grade I	100 mg	A3907.0100
Phosphatase, alkaline from calf intestine (CIP) Grade I	500 mg	A3907.0500
Phosphatase, alkaline from calf intestine (CIP) Grade II	1 g	A3810.0001
Phosphatase, alkaline from calf intestine (CIP) Grade II	5 g	A3810.0005
Phosphatase, alkaline from calf intestine (CIP) Grade II	500 mg	A3810.0500
T4 RNA ligase	1.000 EU	A5203.1000
T4 RNA ligase	5.000 EU	A5203.5000
T4 DNA ligase	10 KU	A5188.10000
T4 DNA ligase	2.000 EU	A5188.2000
T4 polynucleotide kinase	500 EU	A5213.0500
T4 polynucleotide kinase	2.500 EU	A5213.2500
Uracil-DNA glycosylase (UDG)	200 EU	A5234.0200
Uracil-DNA glycosylase (UDG)	1.000 EU	A5234.1000

Exonuclease I

Exonuclease I acts specifically on single-stranded DNA degrading it processively in the 3'- to 5'-direction, producing 5'-mononucleotides. Applications include eliminating residual single-stranded DNA containing a 3'-terminus, measuring endonucleolytic cleavage of covalently closed circular (ccc) ssDNA, measuring DNA helicase activity.

Description	Pk	Cat. No.
Exonuclease I, 5000 units	5.000 EU	E70073X
Exonuclease I, 2500 units	2.500 EU	E70073Z

DNase I



DNase I efficiently hydrolyses single-stranded or double-stranded DNA in the presence of divalent cations. Useful in RNA preparations from tissue or bacterial cell cultures, DNase I is a chromatographically purified preparation supplied as a lyophilised powder.

Description	Pk	Cat. No.
DNase I (bovine pancreas), activity \geq 1800 U/mg	50 KU	0649-50KU
DNase I (bovine pancreas), activity \geq 1800 U/mg	100 KU	0649-100KU

Ribonuclease A (RNase A)



Ribonuclease A is an endoribonuclease that efficiently hydrolyses RNA from tissue or bacterial cell cultures. RNase A is used for a variety of molecular biology applications, most commonly for the hydrolysis of RNA that contaminates DNA preparations. This enzyme is used during plasmid purification without nicking or degrading plasmid DNA.

- Useful during DNA purification
- High purity
- Available in a ready to use solution

Description	Pk	Cat. No.
RNase A, lyophilised powder (bovine pancreas), activity \geq 60 U/mg	250 mg	0675-250MG
RNase A, lyophilised powder (bovine pancreas), activity \geq 60 U/mg	500 mg	0675-500MG
RNase A, lyophilised powder (bovine pancreas), activity \geq 60 U/mg	1 g	0675-1G
RNase A, 10 mg/ml solution, pH 8.0 (bovine pancreas)	1 ml	E866-1ML
RNase A, 10 mg/ml solution, pH 8.0 (bovine pancreas)	5 ml	E866-5ML

RNase inhibitor



RNase inhibitor is used to inhibit the activity of RNases in reaction mixtures for cDNA synthesis and *in vitro* transcription, as well as for long-term storage of valuable RNA samples. A unit of this protein will inhibit 50% of the activity of 5 ng of RNase A.

Description	Pk	Cat. No.
RNase inhibitor (human placental source), 40 KU/ml	10 KU	E633-10KU
RNase inhibitor (human placental source), 40 KU/ml	2 KU	E633-2KU



Proteinase K



Proteinase K is a non specific serine protease with a molecular weight of approximately 18 kDa. This enzyme exhibits high stability and activity in the presence of SDS, EDTA and urea, as well as over a wide pH range. Proteinase K is useful for the inactivation of nucleases during the isolation of DNA and RNA.

- Active over a broad pH range
- High purity

Description	Pk	Cat. No.
Proteinase K from <i>Tritirachium album</i> , lyophilised powder, activity >30 units/mg	100 mg	0706-100MG
Proteinase K from <i>Tritirachium album</i> , lyophilised powder, activity >30 units/mg	500 mg	0706-500MG
Proteinase K from <i>Tritirachium album</i> , lyophilised powder, activity >30 units/mg	1 g	0706-1G
Proteinase K from <i>Tritirachium album</i> , 20 mg/ml solution, activity >30 units/mg	5 ml	E195-5ML
Proteinase K from <i>Tritirachium album</i> , 20 mg/ml solution, activity >30 units/mg	25 ml	E195-25ML

VWR.COM
TALKING YOUR LANGUAGE



The local website with global reach

pure | precise | performance

For research in DNA, RNA,
Protein, Cell Culture
and Histology, expect superior
performance
from AMRESCO's family of
products.



EZ-Vision®

NEXT GEL®

RiboZol™

Rapid Western Kits

Ready PCR Mix

HistoChoice®

**Antibiotics, Reagents,
Buffers and more.**



Standard PCR Reagents	44
Hot Start PCR Reagents	49
Direct PCR Reagents	52
High Fidelity PCR Reagents	53
Long Range PCR Reagents	56
dNTPs and Buffers	57
Tubes	61
Strips	62
Caps	63
Plates	64
Seals	68
Heat Sealers	70
PCR Workstations	72
PCR Cyclers	73

PCR

Taq DNA polymerase

VWR *Taq* DNA polymerase is an ultra-pure, thermostable, recombinant DNA polymerase, which provides robust PCR performance in a wide range of PCR applications, without time-consuming optimisation. The enzyme is isolated from *Thermus aquaticus* and has a molecular weight of approximately 94 kDa. VWR *Taq* DNA polymerase has both a 5' and 3' DNA polymerase and a double strand 5' to 3' exonuclease activity. It leaves an A overhang, which makes the enzyme ideal for TA cloning. Red *Taq* DNA polymerase is a blend of *Taq* DNA polymerase combined with an inert red dye. The dye enables quick visual recognition of reactions to which enzyme has been added, as well as confirmation of complete mixing.

- Most suitable choice for routine applications
- High performance, thermostable DNA polymerase
- Ideal for rich amplifications
- Optimal for TA cloning

Taq DNA polymerase concentration: 5 Units/μl

Description

Description	Pk	Cat. No.
<i>Taq</i> DNA polymerase, 10X Key Buffer (15 mM MgCl ₂), 10X Extra Buffer (15 mM MgCl ₂), 25 mM MgCl ₂	250 EU	733-1300
<i>Taq</i> DNA polymerase, 10X Key Buffer (15 mM MgCl ₂), 10X Extra Buffer (15 mM MgCl ₂), 25 mM MgCl ₂	500 EU	733-1301
<i>Taq</i> DNA polymerase, 10X Key Buffer (15 mM MgCl ₂), 10X Extra Buffer (15 mM MgCl ₂), 25 mM MgCl ₂	1.000 EU	733-1302
<i>Taq</i> DNA polymerase, 10X Key Buffer (15 mM MgCl ₂), 10X Extra Buffer (15 mM MgCl ₂), 25 mM MgCl ₂	2.500 EU	733-1819
<i>Taq</i> DNA polymerase, 10X Key Buffer (15 mM MgCl ₂), 10X Extra Buffer (15 mM MgCl ₂), 25 mM MgCl ₂	5.000 EU	733-1820
<i>Taq</i> DNA polymerase, 10X Key Buffer (15 mM MgCl ₂), 10X Extra Buffer (15 mM MgCl ₂), 25 mM MgCl ₂	10.000 EU	733-1303
<i>Taq</i> DNA polymerase, 10X Tween-free Key Buffer, 10X Triton-free Extra Buffer, 25 mM MgCl ₂	1.000 EU	733-1307
<i>Taq</i> DNA polymerase, 10X Tween-free Key Buffer, 10X Triton-free Extra Buffer, 25 mM MgCl ₂	10.000 EU	733-1823
<i>Taq</i> DNA polymerase, 10X MgCl ₂ -free Key Buffer, 25 mM MgCl ₂	500 EU	733-1311
<i>Taq</i> DNA polymerase, 10X MgCl ₂ -free Key Buffer, 25 mM MgCl ₂	1.000 EU	733-1312
<i>Taq</i> DNA polymerase, 10X Key Buffer (20 mM MgCl ₂), 10X Extra Buffer (20 mM MgCl ₂), 25 mM MgCl ₂	1.000 EU	733-1826
Red <i>Taq</i> DNA polymerase, 10X Key Buffer (15 mM MgCl ₂), 10X Extra Buffer (15 mM MgCl ₂), 25 mM MgCl ₂	2.500 EU	733-1323
Red <i>Taq</i> DNA polymerase, 10X Key Buffer (15 mM MgCl ₂), 10X Extra Buffer (15 mM MgCl ₂), 25 mM MgCl ₂	10.000 EU	733-1834
<i>Taq</i> DNA polymerase, 10X glycerol-free Extra Buffer, 25 mM MgCl ₂	1.000 EU	733-1817
<i>Taq</i> DNA polymerase, 10X MgCl ₂ -free Extra Buffer, 25 mM MgCl ₂	500 EU	733-1304
<i>Taq</i> DNA polymerase, 10X MgCl ₂ -free Extra Buffer, 25 mM MgCl ₂	1.000 EU	733-1305
<i>Taq</i> DNA polymerase, 10X MgCl ₂ -free Key Buffer, 25 mM MgCl ₂	2.500 EU	733-1313
<i>Taq</i> DNA Polymerase 5U/μl Mg-free buffer, 10X Mg-free Key Buffer, 25 mM MgCl ₂	10.000 EU	733-2009

EU = Units

Taq DNA polymerase**5 PRIME**

An ultra-pure, thermostable recombinant DNA polymerase offering the highest purity, reproducibility and processivity. The enzyme provides a thermostability that meets the requirements of specialised PCR applications. An initial incubation of 20 minutes at 95 °C before starting the PCR reaction does not significantly influence the activity of the enzyme.

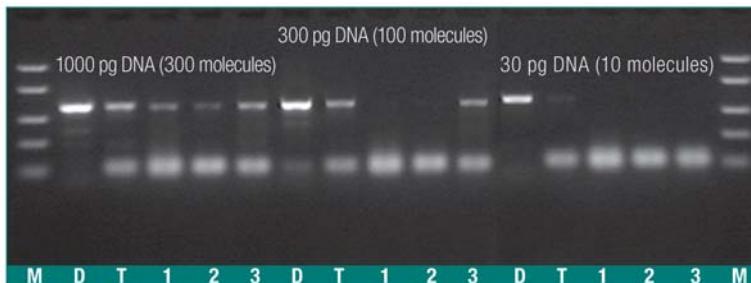
- High yield and specificity
- Self adjusting Mg²⁺ buffer technology minimises PCR optimisation

Product comprises: *Taq* DNA polymerase (5 U/μl), 10X reaction buffer with Mg²⁺, and separate vial of 25 mM magnesium solution.

Description	Pk	Cat. No.
<i>Taq</i> DNA polymerase, 100 U (40 - 100 reactions of 50 μl)	100	733-0105
<i>Taq</i> DNA polymerase, 250 U (100 - 250 reactions of 50 μl)	250	733-0107
<i>Taq</i> DNA polymerase, 1000 U (400 - 1000 reactions of 50 μl)	1000	733-0180
<i>Taq</i> DNA polymerase, 5000 U (5×1000 U; 2000 - 5000 reactions of 50 μl)	5000	733-0991

DreamTaq™ DNA polymerase, Fermentas

Thermo Scientific



DreamTaq™ DNA polymerase is an enhanced *Taq* DNA polymerase optimised for all standard PCR applications. It ensures higher sensitivity, longer PCR products and higher yields compared to conventional *Taq* DNA polymerase. DreamTaq™ DNA polymerase uses the same reaction set-up and cycling conditions as conventional *Taq* DNA polymerase. Extensive optimisation of reaction conditions is not required. The enzyme is inhibited by dUTP but can incorporate modified nucleotides. Applications include routine PCR amplification of DNA fragments up to 6 kb from genomic DNA and up to 20 kb from viral DNA, RT-PCR, and generation of PCR products for TA cloning.

- Robust amplification with minimal optimisation
- High yields of PCR products
- Higher sensitivity compared to conventional *Taq* DNA polymerase
- Amplification of long targets up to 6 kb from genomic DNA and up to 20 kb from viral DNA
- Generates 3'-dA overhangs
- Incorporates modified nucleotides

Delivery information: Supplied with 10X DreamTaq™ buffer, which includes 20 mM MgCl₂.

Description	Pk	Cat. No.
DreamTaq™ DNA polymerase, 200 units (5 U/μl)	1 KIT	FERMEP0701
DreamTaq™ DNA polymerase, 500 units (5 U/μl)	1 KIT	FERMEP0702
DreamTaq™ DNA polymerase, 5×500 units (5 U/μl)	1 KIT	FERMEP0703
DreamTaq™ DNA polymerase, 20×500 units (5 U/μl)	1 KIT	FERMEP0704

Taq DNA polymerase (native, without BSA), Fermentas

Thermo Scientific

Taq DNA polymerase is a highly thermostable DNA polymerase from the thermophilic bacterium *Thermus aquaticus*. The enzyme catalyses 5'→3' synthesis of DNA, has no detectable 3'→5' exonuclease (proofreading) activity and possesses low 5'→3' exonuclease activity. In addition, *Taq* DNA polymerase exhibits deoxynucleotidyl transferase activity, which frequently results in the addition of extra adenines at the 3'-end of PCR products. Native *Taq* DNA polymerase is preferred for amplification of bacterial DNA sequences homologous to those found in *E.coli*.

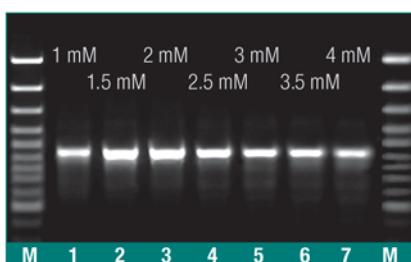
- Thermostable with half life more than 40 minutes at 95 °C
- Generates PCR products with 3'-dA overhangs
- Supplied with two buffers, including 10X *Taq* buffer with (NH₄)₂SO₄, which allows PCR at a wide range of magnesium concentrations and decreases unspecific priming
- Incorporates modified nucleotides (e.g., biotin-, digoxigenin-, fluorescently-labelled nucleotides)

Delivery information: Supplied with 10X *Taq* buffer with KCL, 10X *Taq* buffer with (NH₄)₂SO₄, and 25 mM MgCl₂.

Description	Pk	Cat. No.
<i>Taq</i> DNA polymerase (native, without BSA), 200 units (5 U/μl)	1 KIT	FERMEP0281
<i>Taq</i> DNA polymerase (native, without BSA), 500 units (5 U/μl)	1 KIT	FERMEP0282
<i>Taq</i> DNA polymerase (native, without BSA), low concentration, 200 units (1 U/μl)	1 KIT	FERMEP0283
<i>Taq</i> DNA polymerase (native, without BSA), low concentration, 500 units (1 U/μl)	1 KIT	FERMEP0284

Taq DNA polymerase (recombinant), Fermentas

Thermo Scientific



Taq DNA polymerase is a highly thermostable DNA polymerase from the thermophilic bacterium *Thermus aquaticus*. The enzyme catalyses 5'→3' synthesis of DNA, has no detectable 3'→5' exonuclease (proofreading) activity and possesses low 5'→3' exonuclease activity. In addition, *Taq* DNA polymerase exhibits deoxynucleotidyl transferase activity, which frequently results in the addition of extra adenines at the 3'-end of PCR products. Recombinant *Taq* DNA Polymerase is ideal for standard PCR of templates 5 kb or shorter.

- Thermostable with half life more than 40 minutes at 95 °C
- Generates PCR products with 3'-dA overhangs
- Supplied with two buffers, including 10X *Taq* buffer with (NH₄)₂SO₄, which allows PCR at a wide range of magnesium concentrations and decreases unspecific priming
- Incorporates modified nucleotides (e.g., biotin-, digoxigenin-, fluorescently-labelled nucleotides)

PCR

Standard PCR reagents

Delivery information: Supplied with 10X *Taq* buffer with KCL, 10X *Taq* buffer with $(\text{NH}_4)_2\text{SO}_4$, and 25 mM MgCl₂.

Description	Pk	Cat. No.
<i>Taq</i> DNA polymerase (recombinant), 100 units (5 U/μl)	1 KIT	FERMEP0401
<i>Taq</i> DNA polymerase (recombinant), 500 units (5 U/μl)	1 KIT	FERMEP0402
<i>Taq</i> DNA polymerase (recombinant), low concentration, 100 units (1 U/μl)	1 KIT	FERMEP0403
<i>Taq</i> DNA polymerase (recombinant), low concentration, 500 units (1 U/μl)	1 KIT	FERMEP0404
<i>Taq</i> DNA polymerase (recombinant), 5×500 units (5 U/μl)	1 KIT	FERMEP0405
<i>Taq</i> DNA polymerase (recombinant), 10×500 units (5 U/μl)	1 KIT	FERMEP0406

Taq DNA polymerase MasterMixes



VWR *Taq* DNA polymerase MasterMix is a ready to use 1,1X or 2X reaction mix. Simply add primers, template and water to carry out primer extensions and other molecular biology applications. Red *Taq* DNA polymerase is a blend of *Taq* DNA polymerase combined with an inert red dye. The dye enables visual recognition of reactions to which enzyme has been added, as well as confirmation of complete mixing. Red *Taq* DNA polymerase can be directly loaded onto an agarose gel without addition of electrophoresis loading buffers.

Description	Pk	Cat. No.
<i>Taq</i> DNA polymerase 1,1X MasterMix, 1,5 mM MgCl ₂	500 Tests	733-2540
	2,500 Tests	733-1314
<i>Taq</i> DNA polymerase 1,1X MasterMix, 2,0 mM MgCl ₂	500 Tests	733-2541
	2,500 Tests	733-1315
Red <i>Taq</i> DNA polymerase 1,1X MasterMix, 1,5 mM MgCl ₂	500 Tests	733-2544
	2,500 Tests	733-1318
Red <i>Taq</i> DNA polymerase 1,1X MasterMix, 2,0 mM MgCl ₂	500 Tests	733-2545
	2,500 Tests	733-1319
<i>Taq</i> DNA polymerase 2X MasterMix, 1,5 mM MgCl ₂	500 Tests	733-2542
	2,500 Tests	733-1316
<i>Taq</i> DNA polymerase 2X MasterMix, 2,0 mM MgCl ₂	500 Tests	733-2543
	2,500 Tests	733-1317
Red <i>Taq</i> DNA polymerase 2X MasterMix, 1,5 mM MgCl ₂	500 Tests	733-2546
	2,500 Tests	733-1320
Red <i>Taq</i> DNA polymerase 2X MasterMix, 2,0 mM MgCl ₂	500 Tests	733-2547
	2,500 Tests	733-1321

Tests = Reactions

DreamTaq™ PCR master mix (2X), Fermentas

Thermo Scientific

DreamTaq™ PCR master mix (2X) is a ready to use solution containing DreamTaq™ DNA polymerase, optimised DreamTaq™ buffer, MgCl₂ and dNTPs. This pre-mixed formulation saves time and reduces contamination due to the fewer pipetting steps required for PCR set-up. DreamTaq™ DNA polymerase is an enhanced *Taq* polymerase optimised for high throughput PCR applications. It ensures robust amplification of PCR products up to 6 kb from genomic DNA and up to 20 kb from viral DNA.

- Convenient, ready to use
- High yields of PCR products
- Higher sensitivity compared to conventional *Taq* DNA polymerase
- Amplification of long targets up to 6 kb from genomic DNA and up to 20 kb from viral DNA
- Robust amplification of difficult templates

Delivery information: Supplied with nuclease-free water.

Description	Pk	Cat. No.
DreamTaq™ PCR master mix (2X), 4×1,25 ml (for 200 reactions of 50 μl)	5 ml	FERMK1071
DreamTaq™ PCR master mix (2X), 20×1,25 ml (for 1000 reactions of 50 μl)	25 ml	FERMK1072

illustra™ PuReTaq Ready-To-Go™ PCR beads

GE Healthcare



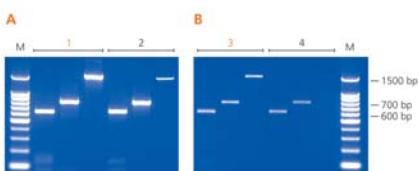
illustra™ PuReTaq Ready-To-Go™ PCR beads are designed for performing standard PCR. The only additional reagents are water, template DNA and primers. The beads are provided in either 0,5 ml or 0,2 ml tubes that are compatible with most thermal cyclers. The 0,2 ml tubes come assembled in a 96-well (8×12) plate format that allows individual strips of eight tubes to be easily removed. This flexibility allows use of either the entire 96-well plate, strips of eight, or individual 0,2 ml tubes.

- Pre-mixed, pre-dispensed reactions for PCR featuring high performance PuReTaq DNA polymerase
- Pre-formulated, pre-dispensed, single-dose, ambient-temperature-stable beads ensure greater reproducibility between reactions, minimise pipetting steps and reduce the potential for pipetting errors and contamination
- Use of PuReTaq DNA polymerase and other high purity reagents ensures that each bead is free of contaminating DNA
- Optimised for standard PCR, each bead yields a reaction containing ~2,5 units of PuReTaq DNA polymerase, 10 mM Tris-HCl, (pH 9,0 at room temperature), 50 mM KCl, 1,5 mM MgCl₂, 200 µM of each dNTP, stabilisers, and BSA

Description	Pk	Cat. No.
illustra™ PuReTaq Ready-To-Go™ PCR Beads (0,2 ml tubes/multiwell plate)	96 Tests	27-9557-01
illustra™ PuReTaq Ready-To-Go™ PCR Beads (0,2 ml tubes/multiwell plate), 5×96 reactions	480 Tests	27-9557-02
illustra™ PuReTaq Ready-To-Go™ PCR Beads (0,2 ml hinged tubes with cap)	96 Tests	27-9559-01
illustra™ PuReTaq Ready-To-Go™ PCR Beads (0,5 ml tubes)	100 Tests	27-9558-01

PerfectTaq™ DNA polymerase

5 PRIME



The PerfectTaq™ DNA polymerase kit provides the components and procedures necessary for efficient and robust standard end point PCR and RT-PCR applications without optimisation.

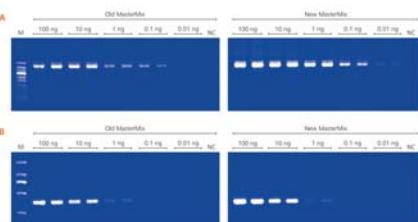
- Higher yields compared to other *Taq* DNA polymerases
- High sensitivity and specificity
- Time saving standardised protocols

Product comprises: PerfectTaq™ DNA polymerase (5 U/µl), 10X PCR buffer, 25 mM MgCl₂.

Description	Cat. No.
PerfectTaq™ DNA polymerase kit, 250 U (200 reactions of 50 µl)	250 EU 733-1767
PerfectTaq™ DNA polymerase kit, 250 U (800 reactions of 50 µl)	1.000 EU 733-1768

MasterMix

5 PRIME



For robust amplification with minimal reaction set-up. This 2,5X MasterMix is ready to use and offers high reproducibility for large sample series. Because only primer and template need to be added to the 2,5X concentrate, MasterMix reduces the number of time consuming pipetting steps. This not only reduces the likelihood of errors and the risk of contamination, but also increases precision and sample throughput.

- Ready to use master mix format
- Minimal optimisation with self-adjusting Mg₂₊ buffer technology
- Convenient 4 °C storage eliminates freeze and thaw cycles

Product comprises: *Taq* DNA polymerase (0,06 U/µl), nucleotides, 25 mM magnesium

solution, 2,5X Reaction Buffer and Master *Taq* to ensure high yields and excellent stability of the reaction components.

Description	Pk	Cat. No.
2,5X MasterMix (2×1 ml), 100 reactions of 50 µl	100 Tests	733-0106
2,5X MasterMix (20×1 ml), 1000 reactions of 50 µl	1000 Tests	733-0113

MasterTaq kits**5 PRIME**

MasterTaq kits are designed to ensure improved yield and reliable PCR products. The TaqMaster PCR enhancer (5X concentration) has been specifically developed to improve the amplification of difficult templates by stabilising the enzyme during the reaction process. TaqMaster PCR enhancer improves the thermostability of the *Taq* DNA polymerase and makes it less sensitive to exogenous PCR inhibiting contamination. Impure and GC-rich templates show increased yields and reproducible results.

Kit comprises: TaqMaster PCR enhancer (5X), *Taq* DNA polymerase (5 U/μl), reaction buffer (10X), and Mg²⁺

Description	Pk	Cat. No.
MasterTaq kit, 250 U (100-250 reactions of 50 μl)	250	733-0114
MasterTaq kit, 500 U (200-500 reactions of 50 μl)	500	733-0115
MasterTaq kit, 1000 U (400-1000 reactions of 50 μl)	1000	733-0116

**PIPETTE CALIBRATION
AT VWR INTERNATIONAL**

VWR **PIPET SERVICES™**

All brands and all models
calibrated by certified technicians.



PerfectTaq™ Plus DNA polymerase

5 PRIME



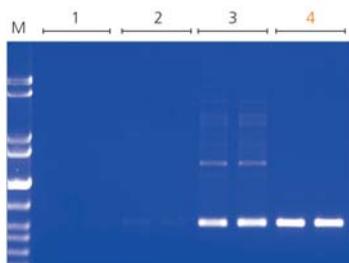
Easy to use enzyme for efficient and robust standard end point PCR applications without optimisation.

- High target yield and specificity - Hot Start enzyme with unique PCR buffer
- Time saving - storage at 4 °C eliminates the need for freeze-thaw cycles
- Convenience - optional loading dye allows for direct gel electrophoresis
- No PCR optimisation - one standardised protocol due to optimised buffer

Description	Pk	Cat. No.
PerfectTaq™ Plus DNA polymerase, sufficient for 40×50 µl reactions	50 EU	733-2065
PerfectTaq™ Plus DNA polymerase, sufficient for 200×50 µl reactions	250 EU	733-2066
PerfectTaq™ Plus DNA polymerase, sufficient for 800×50 µl reactions	1.000 EU	733-2067

PerfectTaq™ Plus MasterMix

5 PRIME



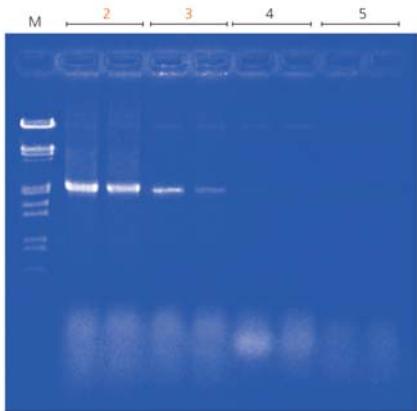
Easy to use MasterMix for efficient and robust standard end point.

- Minimal handling: Ready to use master mix format
- High target yield and specificity: Hot Start enzyme with unique PCR buffer
- Time saving: Storage at 4 °C eliminates the need for freeze-thaw cycles
- Convenience: Optional loading dye allows for direct gel electrophoresis

Description	Pk	Cat. No.
PerfectTaq™ Plus MasterMix	200 Tests	733-2068

HotMaster Taq DNA polymerase

5 PRIME



Hot Start is a well established and convenient method to improve specificity of PCR. However, conventional technologies, like antibody mediated inhibition or chemical blocking of DNA polymerases, carry a few limitations - long initial activation steps may be required, the performance of the DNA polymerase can be reduced or specificity control may be compromised. 5 PRIME HotMaster Taq DNA polymerase uses an innovative technology to achieve Hot Start PCR. A thermostable inhibitor of the Taq DNA polymerase is released at high temperatures, thereby immediately activating the enzyme. The HotMaster technology not only provides Hot Start control at reaction set-up, but also Cold Stop during the annealing step of each cycle of PCR.

- Hot Start/Cold Stop technology requires no enzyme activation step making it ideal for fast PCR protocols
- Convenient room temperature reaction set-up
- Highly specific amplification
- Minimal optimisation with self adjusting Mg₂₊ buffer technology

Product comprises: HotMaster Taq DNA polymerase (5 U/µl) and 10X HotMaster Taq Buffer with 25 mM Mg₂₊.

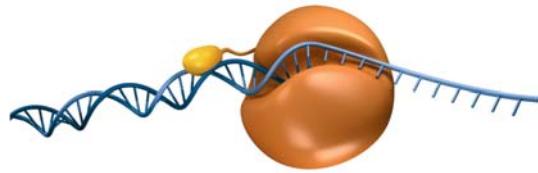
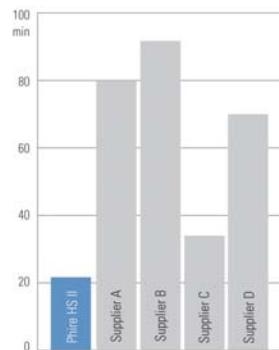
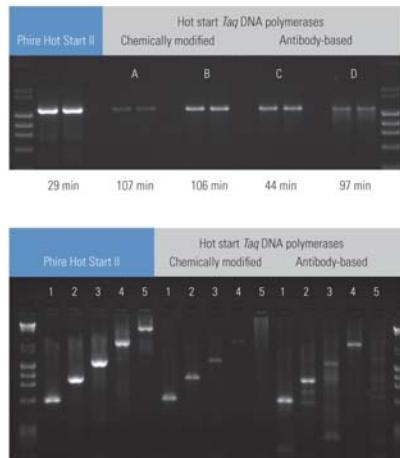
Description	Pk	Cat. No.
HotMaster Taq DNA polymerase, 100 U (40 - 80 reactions of 50 µl)	100	733-0117
HotMaster Taq DNA polymerase, 250 U (100 - 200 reactions of 50 µl)	250	733-0118
HotMaster Taq DNA polymerase, 1000 U (400 - 800 reactions of 50 µl)	1000	733-0119
HotMaster Taq DNA polymerase, 5000 U (2000 - 4000 reactions of 50 µl)	5000	733-0992

PCR

Hot Start PCR reagents

Phire® Hot Start II DNA polymerase, Finnzymes

Thermo Scientific



Phire® Hot Start II DNA polymerase is faster, extremely robust, and capable of amplifying long DNA fragments with high yields. Phire® Hot Start II DNA polymerase incorporates a dsDNA-binding domain which allows short extension times (10 to 15 s/ kb), improves yields, and increases fidelity 2-fold compared to *Taq* DNA polymerase. In addition, the Hot Start technology allows complete reactivation of the enzyme in "zero-time" at standard cycling temperatures. This combination of features makes the polymerase an ideal solution for routine and high throughput PCR applications. Phire® Hot Start II DNA polymerase delivers superior performance in conventional thermal cyclers as well as in fast instruments, such as the Piko® Thermal Cycler.

- Quick Hot Start: No reactivation step
- Fast enzyme: Amplify four times faster than with Hot Start *Taq*
- Robust: Minimal reaction optimisation due to high inhibitor tolerance
- High yields: Abundant products due to high efficiency
- Longer PCR products: Amplify significantly longer DNA fragments than with Hot Start *Taq*

Description	Pk	Cat. No.
Phire® Hot Start II DNA polymerase, 200×50 µl reactions	1 KIT	FINRF-122S
Phire® Hot Start II DNA polymerase, 1000×50 µl reactions	1 KIT	FINRF-122L

Maxima™ Hot Start *Taq* DNA polymerase, Fermentas

Thermo Scientific



Maxima™ Hot Start DNA polymerase is designed to enhance the specificity, sensitivity and yield of DNA amplification. In addition, the enzyme provides the convenience of reaction set-up at room temperature. Maxima™ Hot Start DNA polymerase is a recombinant DNA polymerase which has been chemically modified by the addition of heat-labile blocking groups to its amino acid residues. The enzyme is inactive at room temperature, avoiding extension of non specifically annealed primers or primer dimers and providing higher specificity of DNA amplification. The functional activity of the enzyme is restored during a short 4-minute incubation at 95 °C. The activated enzyme maintains the same functionality as DNA

polymerase: catalyses 5'→3' synthesis of DNA, has no detectable 3'→5' proofreading exonuclease activity, but possesses low 5'→3' exonuclease activity. It exhibits deoxynucleotidyl transferase activity, which adds extra adenines at the 3'-end of PCR products. Before activation, these two activities are not detectable. Applications include Hot Start PCR, high yield amplification of targets up to 3 kb from genomic DNA and up to 5 kb from viral DNA, RT-PCR, highly specific amplification of complex genomic and cDNA templates, amplification of low copy DNA targets, qPCR, multiplex PCR, and generation of PCR products for TA cloning.

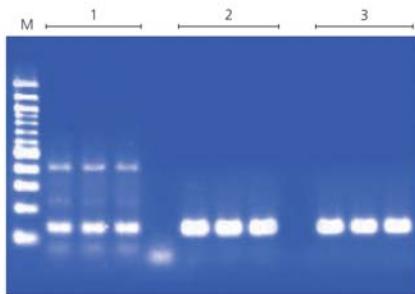
- High yield amplification of complex templates
- Four minute activation time
- High PCR specificity – reduced effects of mispriming and primer-dimer formation
- Enhanced PCR sensitivity
- Convenient room temperature PCR set-up
- Generates PCR products with 3'-dA overhangs

Delivery information: Supplied with 10X Hot Start PCR buffer and 25 mM MgCl₂.

Description	Pk	Cat. No.
Maxima™ Hot Start <i>Taq</i> DNA polymerase, 100 units (5 U/µl)	1 KIT	FERMEP0601
Maxima™ Hot Start <i>Taq</i> DNA polymerase, 500 units (5 U/µl)	1 KIT	FERMEP0602
Maxima™ Hot Start <i>Taq</i> DNA polymerase, 5×500 units (5 U/µl)	1 KIT	FERMEP0603

HotMasterMix

5 PRIME



HotMasterMix is a ready to use 2,5X reagent mix for performing high throughput PCR (based on Hot Start/Cold Stop technology). The HotMasterMix guarantees the highest specificity and consistency. The key component of the mix is the HotMaster *Taq* DNA polymerase that consists of a pre-mixed HotMaster inhibitor that binds and blocks the substrate-binding site of HotMaster *Taq* in a temperature-dependent manner. At temperatures above 60 °C, the inhibitor is released and the HotMaster *Taq* becomes activated - Hot Start. At temperatures below 60 °C, the inhibitor inactivates the *Taq* polymerase - Cold Stop, preventing non specific primer annealing or primer-dimer formation. Unlike many conventional Hot Start PCR techniques, such binding-releasing equilibrium is reversible throughout the PCR cycle.

- Highly specific PCR
- Ready to use master mix format
- Convenient storage at 4 °C eliminates freeze and thaw cycles
- Minimal optimisation with self adjusting Mg²⁺ buffer technology

Product comprises: *Taq* DNA polymerase (1,0 U/50 µl reaction), KCl, Mg²⁺ and dNTPs.

Description	Pk	Cat. No.
HotMasterMix, 100 reactions 50 µl each	100 Tests	733-0120
HotMasterMix, 1000 reactions 50 µl each	1000 Tests	733-0121

illustra™ Hot Start Master Mix

GE Healthcare

illustra™ Hot Start Master Mix combines high quality recombinant *Taq* DNA polymerase, a recombinant Hot Start activator protein, and nucleotides in a proprietary reaction buffer. This ready to use mix provides robust and reliable performance for demanding PCR applications in which high specificity and high sensitivity are essential to success. The mix does not contain *Taq* antibody and this eliminates the risk of contamination from a mammalian source. Also, since the polymerase is not chemically inactivated, there is no extensive pre-cycling heating step necessary; this reduces the chance of damaging precious DNA samples from heat-induced depurination. The net result from using illustra™ Hot Start Master Mix is a more robust and reliable amplification of the target amplicons with increased yield when compared to conventional Hot Start Master Mix products.

- Recombinant Hot Start activator protein sequesters primers prior to PCR, effectively reducing non specific priming and primer-dimer formation
- Quick Hot Start activation preserves sample integrity by avoiding extensive pre-cycling heat treatment
- Avoids the risk of contamination from a mammalian source associated with Hot Start antibodies
- Convenient, ready to use mix saves time and reduces experimental variability
- Appropriate for any standard PCR reaction, such as multiplex PCR, and reactions exhibiting non specific amplification or primer-dimer formation

Description	Pk	Cat. No.
illustra™ Hot Start Master Mix, 100 reactions	1 KIT	25-1500-01

illustra™ Hot Start Mix, Ready-To-Go™

GE Healthcare

Pre-formulated and pre-dispensed, freeze-dried PCR reagents mix including high quality PuReTaq™ DNA polymerase and a Hot Start activator protein, for increased specificity and reproducibility of PCR amplifications. The Ready-To-Go™ beads are provided in either 0,5 mL or 0,2 mL tubes that are compatible with most thermal cyclers.

- Recombinant Hot Start activator protein sequesters primers prior to PCR, effectively reducing non specific priming and primer-dimer formation
- Avoids the risk of contamination from a mammalian source associated with Hot Start antibodies
- Quick Hot Start activation preserves sample integrity by avoiding extensive pre-cycling heat treatment
- Long-term ambient-temperature-stable: no freezer space required; less energy consumption for shipping and storage
- Validated for real time PCR

Description	Pk	Cat. No.
illustra™ Hot Start Mix, Ready-To-Go™, 0,2 ml tubes, 96 reactions	96 Tests	28-9006-53
illustra™ Hot Start Mix, Ready-To-Go™, 0,5 ml tubes, 100 reactions	100 Tests	28-9006-46
illustra™ Hot Start Mix, Ready-To-Go™, 0,2 ml tubes, 5× 96 reactions	480 Tests	28-9006-54

Direct PCR kits

Thermo Scientific

Direct PCR kits save time and cost by allowing amplification of DNA directly from the source material. Direct PCR is based on Thermo Scientific Phire® Hot Start II DNA polymerase and Phusion® Hot Start II High-Fidelity DNA polymerase. These fusion enzymes are exceptionally fast, robust and highly tolerant of many PCR inhibitors present in unpurified sample material. This allows reliable amplification in challenging conditions where conventional DNA polymerases are completely inhibited.

- No need for time consuming and expensive DNA purification steps
- Very little sample material required
- Simple protocols with minimal hands-on time
- Short PCR protocol times
- Tested with wide variety of sample types
- Robust Hot Start DNA polymerases guarantee high yields of specific product

Description	Pk	Cat. No.
PCR directly from plants		
Phire® Plant Direct PCR kit, 200 reactions (50 µl each)	1 KIT	ADVAF-130
PCR directly from animal tissues		
Phire® Animal Tissue Direct PCR kit, 200 reactions (50 µl each)	1 KIT	ADVAF-140
PCR directly from human sample types		
Phusion® Human Specimen Direct PCR kit, 200 reactions (20 µl each)	1 KIT	ADVAF-150
PCR directly from whole blood		
Phusion® Blood Direct PCR kit, F-547L, 500 reactions (20 µl each)	1 KIT	ADVAF-547L
Phusion® Blood Direct PCR kit, F-547S, 100 reactions (20 µl each)	1 KIT	ADVAF-547S

E-BUSINESS

More than just a webshop for all of your laboratory needs

Please visit us at: <http://eu.vwr.com/e-business>



AccuPOL DNA polymerase



AccuPOL DNA polymerase is a thermostable enzyme that possesses 3' to 5' exonuclease proofreading ability, which enables the polymerase to correct nucleotide misincorporation errors. AccuPOL is recommended for applications which require extremely high fidelity with low error rate. PCR fragments generated with AccuPOL DNA polymerase are also ideal for blunt end cloning.

Optimal reaction conditions are achieved by using the 10X AccuPOL standard buffer containing MgCl₂ provided with the enzyme. A separate vial of 25 mM MgCl₂ is also included in case a higher MgCl₂ concentration is required for a specific reaction.

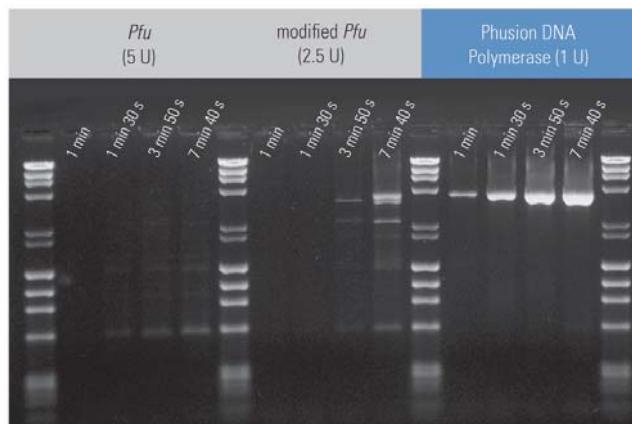
- The choice for high fidelity amplifications
- Provides higher fidelity than *Taq* DNA polymerase
- Optimal for blunt end cloning
- Processes <3 kb with extremely high fidelity

Description	Pk	Cat. No.
AccuPOL DNA polymerase (2,5 U/μl), with 10X standard buffer, 25 mM MgCl ₂	250 EU	733-1324
AccuPOL DNA polymerase (2,5 U/μl), with 10X standard buffer, 25 mM MgCl ₂	500 EU	733-1325
AccuPOL DNA polymerase (2,5 U/μl), with 10X standard buffer, 25 mM MgCl ₂	1.000 EU	733-1326
AccuPOL DNA polymerase (2,5 U/μl), with 10X standard Tween®-free buffer, 25 mM MgCl ₂	250 EU	733-1328
AccuPOL DNA polymerase (2,5 U/μl), with 10X standard Tween®-free buffer, 25 mM MgCl ₂	1.000 EU	733-1329

EU = Units

Phusion® High-Fidelity DNA polymerase, Finnzymes

Thermo Scientific



Phusion® High Fidelity DNA polymerase generates PCR products with an accuracy and speed unattainable with a single enzyme, even on the most difficult templates. The structure and characteristics of Phusion® High Fidelity DNA polymerase make it a superior choice for cloning, and sets the standard for PCR performance with an error rate 50-fold lower than that of *Taq* DNA polymerase, and 6-fold lower than that of *Pfu* DNA polymerase. In addition, Phusion® High Fidelity DNA polymerase possesses processivity 10-fold greater than *Pfu* DNA polymerase.

- Accuracy: Highest fidelity of any available thermostable polymerase
- Speed: Increased processivity allows shorter reaction times (extension 15-30 s/kb)
- Robustness: Fewer reaction failures and minimal optimisation
- High yields: Increase product yields with minimal enzyme amounts

Delivery information: Phusion® High-Fidelity DNA polymerase is supplied with 5X Phusion® HF Buffer, 5X Phusion® GC Buffer, DMSO and 50 mM MgCl₂ solution. Both Phusion® HF Buffer and Phusion® GC Buffer contain 7.5 mM MgCl₂ in the provided 5X concentration.

Description	Pk	Cat. No.
Phusion® High-Fidelity DNA polymerase, 100 U (2 U/μl)	100 EU	FINRF-530S
Phusion® High-Fidelity DNA polymerase, 500 U (2 U/μl)	500 EU	FINRF-530L

Exact polymerase

5 PRIME

For high fidelity, Hot Start PCR.

- Robust amplification with Hot Start enzyme
- Accurate products by efficient proofreading activity
- Minimal PCR optimisation due to special buffer formulation

Description	Pk	Cat. No.
Exact polymerase, sufficient for 40 reactions	100 EU	733-0993

PCR

High Fidelity PCR reagents

Pfu DNA polymerase, Fermentas

Thermo Scientific

Pfu DNA polymerase is a highly thermostable DNA polymerase from the hyperthermophilic archaeum *Pyrococcus furiosus*. The enzyme catalyses the template-dependent polymerisation of nucleotides into duplex DNA in the 5'→3' direction. *Pfu* DNA polymerase also exhibits 3'→5' exonuclease (proofreading) activity, that enables the polymerase to correct nucleotide incorporation errors. It has no 5'→3' exonuclease activity. Applications include high fidelity PCR, generation of PCR products for cloning and expression, and RT-PCR for cDNA cloning and expression.

- Eight times more accurate than *Taq* DNA polymerase
- Highly thermostable – remains 95% active after 2 hours incubation at 95 °C
- Generates blunt end PCR products
- Incorporates modified nucleotides (e.g., biotin-, digoxigenin-, fluorescently-labelled nucleotides)
- Increased PCR yields with native *Pfu* DNA polymerase

Delivery information: Supplied with 10X *Pfu* buffer with MgSO₄, 10X *Pfu* buffer, and 25 mM MgSO₄.

Description	Pk	Cat. No.
<i>Pfu</i> DNA polymerase (recombinant), 100 units (2,5 U/μl)	1 KIT	FERMEP0501
<i>Pfu</i> DNA polymerase (recombinant), 500 units (2,5 U/μl)	1 KIT	FERMEP0502
<i>Pfu</i> DNA polymerase (native), 100 units (2,5 U/μl)	1 KIT	FERMEP0571
<i>Pfu</i> DNA polymerase (native), 500 units (2,5 U/μl)	1 KIT	FERMEP0572

Phusion® High-Fidelity PCR Master Mix, Finnzymes

Thermo Scientific

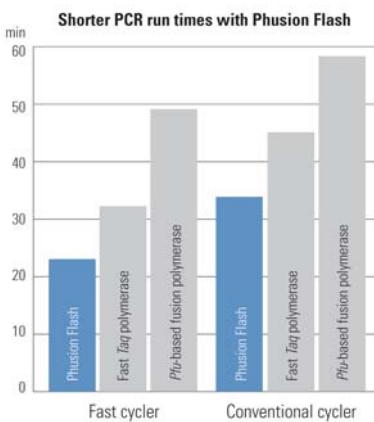
Phusion® High-Fidelity PCR Master Mix with HF Buffer is a convenient 2X mix containing Phusion® DNA polymerase, nucleotides and optimised HF buffer including MgCl₂. Only template and primers need to be added by the user.

Each kit contains Phusion® DNA polymerase, 2X Phusion® HF Buffer and 400 μM of each dNTP. The master mix supplies 1,5 mM MgCl₂ and 200 μM dNTP in -nal reaction concentration. A separate tube of DMSO is provided with the product.

Description	Pk	Cat. No.
Phusion® High-Fidelity PCR master mix with HF buffer, 100×50 μl reactions	1 KIT	FINRF-531S
Phusion® High-Fidelity PCR master mix with HF buffer, 500×50 μl reactions	1 KIT	FINRF-531L

Phusion® Flash High-Fidelity PCR master mix, Finnzymes

Thermo Scientific



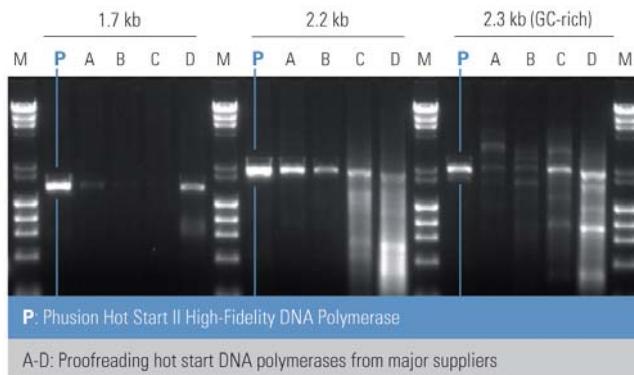
Phusion® Flash High-Fidelity PCR Master Mix is a 2X master mix enabling the use of extremely short PCR protocols without compromising either the fidelity or the yield in the reaction. The master mix utilises Phusion® Flash II DNA polymerase, a proofreading DNA polymerase modified from Phusion® Hot Start II High-Fidelity DNA polymerase. The fidelity of the Phusion® Flash II DNA polymerase is 25-fold greater than *Taq*.

Description	Pk	Cat. No.
Phusion® Flash High-Fidelity PCR master mix, 100×20 μl reactions	1 KIT	FINRF-548S
Phusion® Flash High-Fidelity PCR master mix, 500×20 μl reactions	1 KIT	FINRF-548L



Phusion® Hot Start II High-Fidelity DNA polymerase, Finnzymes

Thermo Scientific



Phusion® Hot Start High-Fidelity DNA polymerase allows the use of a wide range of primers, including those with low melting temperatures. Phusion® Hot Start High-Fidelity DNA polymerase is ideal for PCR applications from routine PCR to highly demanding applications, such as cloning and high throughput PCR. It incorporates a unique dsDNA-binding domain making this Pyrococcus-like proofreading DNA polymerase extremely robust, rapid, and accurate.

- No annealing temperature limitations
- Allows reaction set up at room temperature
- Zero-time reactivation due to unique Hot Start technology
- Fast PCR enzyme with extreme fidelity (over 6 times more accurate than *Pfu*)
- Robust enzyme with high tolerance against PCR inhibitors requires minimal optimisation

Description	Pk	Cat. No.
Phusion® Hot Start II High-Fidelity DNA polymerase, 100 U (2 U/μl)	100 EU	FINRF-549S
Phusion® Hot Start II High-Fidelity DNA polymerase, 500 U (2 U/μl)	500 EU	FINRF-549L

Phusion® High-Fidelity PCR kit, Finnzymes

Thermo Scientific

Phusion® High-Fidelity PCR kit offers extreme performance for all major PCR applications. Incorporating Phusion® DNA polymerase, the Phusion® High-Fidelity PCR kit contains all the reagents necessary, including lambda DNA control template and primers for 1,3 kb and 10 kb amplicons. The template amount is sufficient for performing 20 control reactions in 50 μl volume or 50 control reactions in 20 μl volume.

Each kit contains Phusion® DNA polymerase (2 U/μl), 5X Phusion® HF Buffer, 5X Phusion® GC Buffer, dNTP mix (10 mM/each), MgCl₂ solution (50 mM), control lambda template (0,5 ng/μl), 1,3 kb primers (4 μM each), 10 kb primers (4 μM each), and DNA size standard.

Description	Pk	Cat. No.
Phusion® High-Fidelity PCR kit, 50×50 μl reactions	1 KIT	FINRF-553S
Phusion® High-Fidelity PCR kit, 200×50 μl reactions	1 KIT	FINRF-553L

THE CHEMICAL BRAND
FROM VWR INTERNATIONAL

VWR  

Order your free copy online at <http://eu.vwr.com/chemical>



PCR

Long Range PCR Reagents

PCR Extender system

5 PRIME

The PCR Extender system is a 3-in-1 kit for PCR applications. This system provides outstanding long-range PCR product yields and achieves fragment lengths up to 40 kb. A Tuning Buffer prevents the acidic hydrolysis (strand breakage) of very long templates, thus markedly increasing the sensitivity of the PCR. The high fidelity buffer and unique enzyme mix ensure minimal errors in proofreading reactions, usually obtained only with specialised high fidelity kits. The unique enzyme blend and buffer combination successfully amplifies templates with a GC-content in excess of 70%.

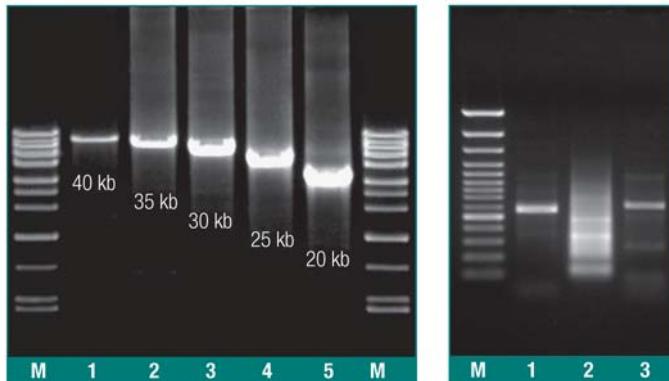
- Efficient amplification up to 40 kb with high yields
- Low error rate and optimised processivity with proofreading enzyme
- Minimal optimisation with self adjusting Mg₂₊ buffer technology
- Optimised amplification of complex and rare targets

Kit comprises: PCR Extender polymerase mix (5 U/μl), 10X tuning buffer (with Mg₂₊), 10X high fidelity buffer (with Mg₂₊), and 25 mM magnesium solution.

Description	Pk	Cat. No.
PCR Extender system, 100 U (50 - 100 reactions)	100	733-0189
PCR Extender system, 200 U (100 - 200 reactions)	200	733-0190
PCR Extender system, 500 U (250 - 500 reactions)	500	733-0191

Long PCR enzyme mix, Fermentas

Thermo Scientific



The long PCR enzyme mix is a unique blend of Fermentas *Taq* DNA polymerase and a thermostable high fidelity DNA polymerase with proofreading activity. The two enzymes synergistically generate long PCR products with greater yield and fidelity than *Taq* DNA polymerase alone. The fidelity of PCR with this enzyme mix is three times higher than with *Taq* DNA polymerase. The ratio of enzymes in the long PCR enzyme mix is optimised for generation of very long amplicons: up to 47 kb with viral DNA and up to 21 kb with genomic DNA templates. The specially formulated long PCR buffer protects DNA from depurination and nicking during long thermal cycling. The products generated with the long PCR enzyme mix are mostly 3'-dA tailed. Long PCR enzyme mix is also used for efficient amplification of GC-rich DNA regions.

- Long PCR products: up to 47 kb with viral DNA as template; up to 21 kb with genomic DNA as template
- Ideal for GC-rich templates up to 85% GC
- Fidelity is three-times higher than with *Taq* DNA polymerase
- High yields
- Incorporates modified nucleotides

Delivery information: Supplied with 10X long PCR buffer, 10X long PCR buffer with 15 mM MgCl₂, 25 mM MgCl₂, DMSO, and nuclease-free water.

Description	Pk	Cat. No.
Long PCR enzyme mix, 100 units (5 U/μl)	1 KIT	FERMK0181
Long PCR enzyme mix, 500 units (5 U/μl)	1 KIT	FERMK0182

dNTP

- Available either as pre-mixed 10 mM or 25 mM solutions, or as sets of individual 100 mM dNTP solutions
- Both pre-mixed and sets have been functionally tested in long PCR
- Purity >98% by HPLC
- Supplied in solution at pH 7,0

Description	Pk	Cat. No.
dNTP Mix, 10 mM of each dA, dC, dG, and dT, 2×500 µl	1.000 µl	733-1363
dNTP Mix, 25 mM of each dA, dC, dG, and dT, 2×1 ml	2.000 µl	733-1854
dNTP Set, separate vials of dA, dC, dG, dT, each 100 mM, 4×250 µl	1 SET	733-1364
dNTP Set, separate vials of dA, dC, dG, dT, each 100 mM, 16×250 µl	1 SET	733-1855

dNTP mix**5 PRIME**

A ready to use mix of dATP, dCTP, dGTP and dTTP at a concentration of 10 mM each. The dNTPs are in the form of sodium salts in solution (pH 7,0). The nucleotides are highly purified to at least 98%, as proven by HPLC and functionally tested in PCR.

Description	Pk	Cat. No.
dNTP Mix, 200 µl (10 mM)	200 µl	733-0130
dNTP Mix, 1000 µl (10 mM)	1 ml	733-0131

PCR nucleotide mix dNTP set, illustra™**GE Healthcare**

PCR nucleotide mix dNTP set (2 mM, 10 mM, or 25 mM each A,C,G,T) for amplification, dideoxy sequencing, labelling, mutagenesis, cDNA synthesis, and expression profiling.

- Free from DNase, RNase, and nicking enzyme activity
- Greater than 99% triphosphate purity (by HPLC) for optimum performance and consistency
- Buffer-free and ready to use solutions in multiple formats
- Functionally tested for long PCR and sequencing

Description	Pk	Cat. No.
PCR nucleotide mix dNTP set (25 mM each A, C, G, T)	500 µl	28-4065-60
PCR nucleotide mix dNTP set (2 mM each A, C, G, T)	1 ml	28-4065-62
PCR nucleotide mix dNTP set (10 mM each A, C, G, T)	500 µl	28-4065-64

dNTP set**5 PRIME**

A kit containing separate solutions of dATP, dCTP, dGTP and dTTP, each at a concentration of 100 mM. The dNTPs are in the form of sodium salts in solution (pH 7,0). The nucleotides are highly purified to at least 98%, as proven by HPLC and functionally tested in PCR.

Description	Pk	Cat. No.
dNTP Set (100 mM), 4×100 µl	4	733-0132
dNTP Set (100 mM), 4×250 µl	4	733-0133

dNTP sets, illustra™**GE Healthcare**

High purity dNTPs for amplification, dideoxy sequencing, labelling, mutagenesis, cDNA synthesis, and expression profiling.

- Free from DNase, RNase, and nicking enzyme activity
- Greater than 99% triphosphate purity (by HPLC) for consistent, high performance
- Buffer-free, ready to use solutions at a variety of concentrations
- Functionally tested to produce a 20,7 kb PCR amplification product from lambda DNA

Description	Pk	Cat. No.
dNTP mix set (20 mM A,C,G,T), 4×10 µmol	1 SET	28-4065-58
dNTP set (100 mM each A,C,G,T), 4×25 µmol	1 SET	28-4065-51
dNTP set (100 mM each A,C,G,T), 4×100 µmol	1 SET	28-4065-52
illustra™ dNTP set, 4×500 µmol (100 mM each A,C,G,T)	1 SET	28-4065-53

10X *Taq* buffer with 15 mM magnesium

5 PRIME

Standard reaction buffer for most PCR applications.

- Self-adjusting Mg²⁺ buffer
- Robust performance

Composition: 500 mM KCl, 100 mM Tris-HCl pH 8.3 (at 25 °C) with 15 mM Mg²⁺

Description	Pk	Cat. No.
10X <i>Taq</i> buffer with Mg ²⁺ , 1,8 ml	1,8 ml	733-0122

5X TaqMaster® PCR enhancer

5 PRIME

TaqMaster® is a buffer additive that improves thermostability (enzyme half-life) and processivity of *Taq* polymerase by stabilising the enzyme during PCR. TaqMaster® is a natural cytosolic solute of plants and bacteria, which protects enzymes under stress conditions such as dessication, heat, and changes in pH and salt concentration. TaqMaster® makes the enzyme less sensitive to exogenous PCR-inhibiting contamination (for example, humic-acid from soil samples, blood compounds, etc). In contrast to other PCR-enhancing additives such as DMSO or glycerol, TaqMaster® is chemically stable and inert, and it does not change the optimal primer annealing temperature or the melting behaviour of template DNA. TaqMaster® is compatible with all polymerases (*Taq* DNA polymerase, enzyme mixes, reverse transcriptases) but is not compatible with HotMasterTaq as the inhibitor would be blocked by the protective shield.

Description	Pk	Cat. No.
5X TaqMaster PCR-Enhancer	1,7 ml	733-0124

INSTRUMENT SERVICE AND MAINTENANCE

Please contact your local VWR sales office for more information



High quality - True HPLC purified Custom Oligos & Primer

- Online order platform via www.vwr.com (Life Science) or www.thermo.com/oligoorder
- True Reverse Phase HPLC purification provides highest quality
- Longer use of one batch and low repetition rate due to more full-length product

SpeedyOligos - Can you afford to wait another day?

- Unique service for HPLC purified Oligonucleotides
- Same day shipment: Order before 9:30 am and we will ship the same day
- Valid for oligos up to 25 bases, 0,02 µmol synthesis scale (>1 OD), unmodified and maximum 20 Oligos per order

OligoClear – require?

Are you integrating our oligos in an IVT diagnostic kit?

- OligoClear will facilitate certification of your product
- Fully trackable process and reagents
- Quality and process customized to your needs



ALL YOU NEED GUIDES

BioBanking

Dairies

Cell culture

Environmental

Genomics

Histology and cytology

Liquid handling

Microscopy

Handy reference tools for your application or technique

Request your copy from your local VWR sales office





PCR Tubes

VWR offer a complete range of PCR tubes.

Here we have made a selection for you of the most popular tubes. The plastic are designed, manufactured and tested to ensure optimal PCR performance.

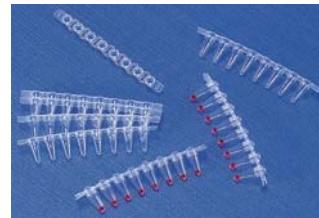


PCR tubes, clear, pack of 1000

ECN		Description	Volume	Cap
732-4803	Abgene	PCR tube, domed cap, clear	0.2 ml	domed
732-4836	Abgene	PCR tube, flat cap, clear	0.2 ml	flat
732-0674	Axygen	PCR tube, flat cap, clear	0.2 ml	flat
732-0676	Axygen	PCR tube, domed cap, clear	0.2 ml	domed
525-0248	Axygen	PCR tube, domed cap, clear, maximum recovery	0.2 ml	domed
525-0249	Axygen	PCR tube, flat cap, clear maximum recovery	0.2 ml	flat
732-0886	Axygen	PCR tube, no cap, clear	0.2 ml	no cap
211-3260	Brand	PCR tube, domed cap, clear	0.2 ml	domed
211-3261	Brand	PCR tube, flat cap, clear	0.2 ml	flat
732-0547	VWR Collection	PCR tube, domed cap, clear	0.2 ml	domed
732-0548	VWR Collection	PCR tube, flat cap, clear	0.2 ml	flat
732-4804	Abgene	PCR tube, flat cap, clear	0.5 ml	flat
732-0459	Abgene	PCR tube, domed cap, clear	0.5 ml	domed
732-0675	Axygen	PCR tube, flat cap, clear	0.5 ml	flat
525-0250	Axygen	PCR tube, domed cap, clear	0.5 ml	domed
525-0251	Axygen	PCR tube, flat cap, clear maximum recovery	0.5 ml	flat
211-3262	Brand	PCR tube, flat cap, clear	0.5 ml	flat

PCR Strips

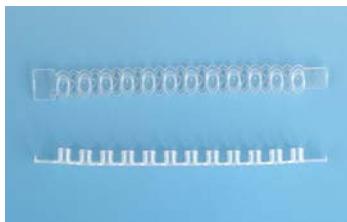
Here we have made a selection for you of the most popular strips.
The plastic are designed, manufactured and tested to ensure optimal PCR performance.



PCR strips								
ECN		Description	Pack size	Profile	Type of strips	Cap	Colour	Tubes & caps per strip
732-4800	Abgene	Strip of 8 PCR tubes, 0.2 ml	250	standard	tubes only		clear	8
732-4810	Abgene	Strip of 8 PCR tubes, 0.2 ml	10 x 12	standard	tubes only		clear	8
732-0678	Axygen	Strip of 8 PCR tubes, 0.2 ml	125	standard	tubes only		clear	8
211-3263	Brand	Strip of 8 PCR tubes, 0.2 ml	125	standard	tubes only		clear	8
732-0549	VWR Collection	Strip of 8 PCR tubes, 0.2 ml	125	standard	tubes only		clear	8
731-0253	Abgene	Strip of 8 PCR tubes, 0.2 ml	250	standard	tubes only		white	8
731-0273	Abgene	Strip of 8 PCR tubes, 0.2 ml	10 x 12	low	tubes only		white	8
732-4946	Abgene	Strip of 12 PCR tubes, 0.2 ml	10 x 8	standard	tubes only		clear	12
731-1258	Brand	Strip of 12 PCR tubes, 0.2 ml	125	standard	tubes only		clear	12
732-0552	VWR Collection	Strip of 12 PCR tubes, 0.2 ml	80	standard	tubes only		clear	12
732-4893	Abgene	Strip of 12 PCR tubes, 0.2 ml	10 x 8	low	tubes only		clear	12
732-4802	Abgene	Strip of 8 PCR tubes and 8 domed caps, 0.2 ml	250	standard	tubes + caps	domed	clear	8
732-4809	Abgene	Strip of 8 PCR tubes and 8 domed caps, 0.2 ml	10 x 12	standard	tubes + caps	domed	clear	8
732-0679	Axygen	Strip of 8 PCR tubes and 8 domed caps, 0.2 ml	125	standard	tubes + caps	domed	clear	8
731-0134	Abgene	Strip of 8 PCR tubes with domed snap caps, 0.2 ml	250	standard	tubes with attached caps	domed	clear	8
211-3264	Brand	Strip of 8 PCR tubes with attached strip of domed caps, 0.2 ml	125	standard	tubes with attached caps	domed	clear	8
732-0545	VWR Collection	Strip of 8 PCR tubes with domed snap caps, 0.2 ml	120	standard	tubes with attached caps	domed	clear	8
732-0551	VWR Collection	Strip of 8 PCR tubes and 8 domed caps, 0.2 ml	125	standard	tubes + caps	domed	clear	8
732-4873	Abgene	Strip of 8 PCR tubes and 8 domed caps, 0.2 ml	10 x 12	low	tubes + caps	domed	clear	8
732-4894	Abgene	Strip of 12 PCR tubes and 12 domed caps, 0.2 ml	10 x 8	low	tubes + caps	domed	clear	12
732-4947	Abgene	Strip of 12 PCR tubes and 12 domed caps, 0.2 ml	10 x 8	standard	tubes + caps	domed	clear	12
732-0554	VWR Collection	Strip of 12 PCR tubes with domed snap caps, 0.2 ml	80	standard	tubes with attached caps	domed	clear	12
732-4874	Abgene	Strip of 8 PCR tubes and 8 flat caps, 0.2 ml	10 x 12	low	tubes + caps	flat	clear	8
732-4877	Abgene	Strip of 8 PCR tubes and 8 flat caps, 0.2 ml	250	low	tubes + caps	flat	clear	8
732-0883	Abgene	Strip of 8 PCR tubes and 8 flat caps, 0.2 ml	250	standard	tubes + caps	flat	clear	8
211-2613	Brand	Strip of 8 PCR tubes with flat snap caps, 0.2 ml	120	standard	tubes with attached caps	flat	clear	8
211-2614	Brand	Strip of 8 PCR tubes with flat snap caps, 0.2 ml	120	low	tubes with attached caps	flat	clear	8
732-0546	VWR Collection	Strip of 8 PCR tubes with flat snap caps, 0.2 ml	125	standard	tubes with attached caps	flat	clear	8
732-4895	Abgene	Strip of 12 PCR tubes and 12 flat caps, 0.2 ml	10 x 8	low	tubes + caps	flat	clear	12
732-4948	Abgene	Strip of 12 PCR tubes and 12 flat caps, 0.2 ml	10 x 8	standard	tubes + caps	flat	clear	12
732-0884	Abgene	Strip of 8 PCR tubes and 8 flat caps, 0.2 ml	10 x 12	standard	tubes + caps	flat ultra clear	clear	8
732-0623	Abgene	Strip of 8 PCR tubes and 8 flat caps, 0.2 ml	10 x 12	standard	tubes + caps	flat ultra clear	white	8
731-0130	Abgene	Strip of 8 PCR tubes with flat snap caps, 0.2 ml	250	standard	tubes with attached caps	flat ultra clear	clear	8
731-0132	Abgene	Strip of 8 PCR tubes with flat snap caps, 0.2 ml	250	standard	tubes with attached caps	flat ultra clear	white	8

Caps for the PCR strips tubes

Here we have made a selection for you of the most popular caps for the PCR strips tubes. The plastic are designed, manufactured and tested to ensure optimal PCR performance.



Caps for the PCR strip tubes						
ECN		Description	Pack size	Cap	Colour	Tubes & caps per strip
732-4801	Abgene	Strip of 8 caps	250	domed	clear	8
732-4806	Abgene	Strip of 8 caps	10 x 12	domed	clear	8
732-4830	Abgene	Strip of 8 caps	25 x 12	domed	clear	8
732-0680	Axygen	Strip of 8 caps	125	domed	clear	8
211-3265	Brand	Strip of 8 caps	125	domed	clear	8
732-0550	VWR Collection	Strip of 8 caps	125	domed	clear	8
732-1130	VWR Collection	Strip of 8 caps	300	domed	clear	8
732-4898	Abgene	Strip of 12 caps	10 x 8	domed	clear	12
732-4899	Abgene	Strip of 12 caps	25 x 8	domed	clear	12
731-1263	Brand	Strip of 12 caps	125	domed	clear	12
732-0553	VWR Collection	Strip of 12 caps	80	domed	clear	12
732-4880	Abgene	Strip of 8 caps	10 x 12	flat	clear	8
732-4881	Abgene	Strip of 8 caps	250	flat	clear	8
732-4882	Abgene	Strip of 8 caps	25 x 12	flat	clear	8
211-0318	VWR Collection	Strip of 8 caps	1.250	flat	clear	8
732-4897	Abgene	Strip of 12 caps	25 x 8	flat	clear	12
732-0081	Abgene	Strip of 12 caps	120 x 8	flat	ultra clear	8
732-0681	Axygen	Strip of 8 caps	125	flat	ultra clear	8
731-1250	Brand	Strip of 8 caps	125	flat	ultra clear	8
732-1129	VWR Collection	Strip of 8 caps	300	flat	ultra clear	8

PCR plates compatibility table

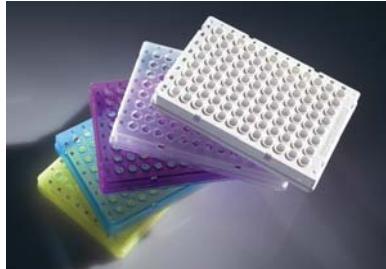
Choosing the right PCR plate for your PCR cycler and assay is important.

Plate model recommendations are based on optimal PCR performance and ease of handling. Most recommended plates are either fully skirted or semi-skirted, as these plates offer increased rigidity, which reduces plate warping during thermal cycling, facilitates multichannel pipetting and improves overall ease of use.

Low profile versions minimise the airspace above the PCR reaction, further reducing evaporating effects. We recommend you to choose low profile options where available.

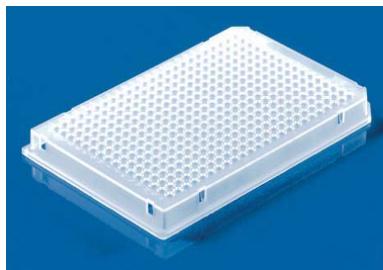
White PCR plastics is the optimal choice for qPCR assays, as it enhances the qPCR detection.

Cat.No.	Description	Profile	Colour	Number of wells	Skirted	Thermo Scientific				Applied Biosystems / Life Technologies				
						Piko 24	Piko 96	Arktik	PikoReal 24	PikoReal 96	GeneAmp® 2700 / 2720 / 9600	9700 GeneAmp®	GeneAmp® 9600 Fast Block	Veriti™ 96 (0.1 ml)
731-0350	Abgene 24 Ultra thin wall plate		clear	24		✓			✓					
731-0362	Abgene 24 Ultra thin wall plate		white	24					✓					
732-1021	Axygen 96-well PCR plate	standard	clear	96	non-skirted						✓			✓
732-4828	Abgene 96-well PCR plate	standard	clear	96	non-skirted		✓			✓	✓			
732-4851	Abgene 96-well PCR plate	low	clear	96	non-skirted		✓							
211-0327	Brand 96-well PCR plate	standard	clear	96	non-skirted					✓	✓			✓
211-0262	VWR Collection 96-well PCR plate	standard	clear	96	non-skirted						✓			
211-0276	VWR Collection 96-well PCR plate	low	clear	96	non-skirted									
732-5008	Abgene 96-well PCR plate	standard	white	96	non-skirted									
732-4853	Abgene 96-well PCR plate	low	white	96	non-skirted									
211-0313	VWR Collection 96-well PCR plate	standard	white	96	non-skirted									
732-0665	Axygen 96-well PCR plate	standard	clear	96	raised semi-skirted					✓	✓			✓
732-1015	Axygen 96-well PCR plate	low	clear	96	raised semi-skirted							✓	✓	
732-0663	Axygen 96-well PCR plate, segmented to cut into 24- or 48-well	standard	clear	96	raised semi-skirted						✓			✓
732-4944	Abgene 96-well PCR plate	standard	clear	96	raised semi-skirted					✓	✓			✓
732-1056	Abgene 96-well PCR plate, rigid	standard	clear	96	raised semi-skirted					✓	✓			✓
732-0803	Axygen 96-well PCR plate	standard	clear	96	semi-skirted					✓		✓		✓
732-0892	Abgene 96-well PCR plate	standard	clear	96	semi-skirted		✓			✓	✓			✓
731-0302	Abgene 96-well PCR plate, raised, for ABI Fast	low	clear	96	semi-skirted							✓	✓	
732-1060	Abgene 96-well PCR plate, rigid, black letter grid	standard	clear	96	semi-skirted		✓			✓	✓			✓
731-0141	Brand 96-well PCR plate, raised rim	standard	clear	96	semi-skirted					✓	✓			
211-0002	Brand 96-well PCR plate, black letter grid	standard	clear	96	semi-skirted					✓	✓			
211-0283	VWR Collection 96-well PCR plate	standard	clear	96	semi-skirted						✓			
211-0290	VWR Collection 96-well PCR plate	low	clear	96	semi-skirted									
732-1591	Axygen 96-well PCR plate, raised, white for Roche Lightcycler	low	white	96	semi-skirted									
732-0400	Abgene 96-well PCR plate, segmented to cut into 24- or 48-well	standard	white	96	semi-skirted									
731-0163	Brand 96-well PCR plate, raised rim	standard	white	96	semi-skirted									



PCR plates compatibility table

Cat.No.	Description	Profile	Colour	Number of wells	Skirted	Thermo Scientific				Applied Biosystems / Life Technologies		
						Piko 24	Piko 96	Arktik	PikoReal 24	PikoReal 96	GeneAmp® 2700 / 2720 / 9600	9700 GeneAmp®
732-0664	Axygen	96-well PCR plate	standard	clear	96	skirted						
732-4888	Abgene	96-well PCR plate	low	clear	96	skirted		✓				
732-4960	Abgene	96-well PCR plate, rigid, rimed plate	low	clear	96	skirted						
732-1049	Abgene	96-well PCR plate, rigid, black letter grid	low	clear	96	skirted		✓				
731-0363	Abgene	Armadillo 96-well, clear wells	low	clear	96	skirted		✓				
731-0168	Brand	96-well PCR plate	low	clear	96	skirted						
211-0297	VWR Collection	96-well PCR plate	standard	clear	96	skirted						
732-0391	Abgene	96-well PCR plate	low	white	96	skirted						
732-1462	Brand	96-well PCR plate	low	white	96	semi-skirted						
732-1463	Brand	96-well PCR plate, with sealing film	low	white	96	semi-skirted						
731-0364	Abgene	Armadillo 96-well, white wells	low	white	96	skirted						
211-0317	VWR Collection	96-well PCR plate	standard	white	96	skirted						
731-0351	Abgene	96 Ultra thin wall plate		clear	96			✓		✓		
731-0365	Abgene	96 Ultra thin wall plate		white	96					✓		
732-1037	Axygen	384-well PCR plate, rigid, 1cut-away corners	standard	clear	384	skirted						
732-0666	Axygen	384-well PCR plate, 2-cut-away corners	standard	clear	384	skirted						
732-4961	Abgene	384-well PCR plate, rigid, 2 cut-away corners		clear	384	skirted		✓			✓	
391-5711	Brand	384-well PCR plate		clear	384	skirted				✓	✓	
732-1376	Axygen											
731-0164	Brand	384-well PCR plate		white	384	skirted						
211-0305	VWR Collection	384-well PCR plate		clear	384							
732-1575	Abgene	Armadillo 384-well, clear wells		clear	384			✓			✓	
732-1579	Abgene	Armadillo 384-well, white wells		white	384							



Applied Biosystems / Life Technologies		Biorad/MJ										Eppendorf		Stratagene		Biometra		Roche	
✓	Veriti™ 384																		
✓	7000/ 7300/7500/7700/7900 Real Time PCR System																		
✓	7500 Fast Real Time PCR System																		
✓	7900 HT Real Time PCR System																		
✓	7900 HT 384 Real Time PCR System																		
✓	StepOne™																		
✓	310 PRISM® Genetic Analyser																		
✓	3100/3130/3700/3730/3730XL PRISM® DNA Analyser																		
✓	iCycler® Thermal Cycler																		
✓	MyCycler™ Thermal Cycler																		
✓	Tetrad® & Tetrad® 2 DNA Engine																		
✓	C 1000® Thermal Cycler																		
✓	S 1000® Thermal Cycler																		
✓	PTC-200® DNA Engine																		
✓	CFX 96™ qPCR system																		
✓	iCycler® iQ™ qPCR system																		
✓	iQ™5 qPCR system																		
✓	MyiQ™ qPCR system																		
✓	Mastercycler® ep																		
✓	Mastercycler® ep realplex																		
✓	Mastercycler® personal / Mastercycler® gradient																		
✓	Mx-3000P® / Mx-3005P®																		
✓	Mx-4000®																		
✓	Uno																		
✓	Uno II																		
✓	T1 Thermocycler																		
✓	Tgradient																		
✓	Trobot																		
✓	Roche Lightcycler 96 well																		
✓	Roche Lightcycler 384 well																		

PCR seals

Here we have made a selection for you of the most popular PCR seals.



PCR seal plates

ECN		Description	pack size
732-0498	Abgene	Adhesive seal for qPCR plates	50
732-4819	Abgene	Adhesive film for PCR plates (end point)	100
732-4838	Abgene	Adhesive foil for PCR plates (end point)	100
732-7509	Abgene	Adhesive seal for qPCR plates	100
732-1475	Brand	Self adhesive seal for qPCR plates	100
391-1258	VWR Collection	Ultra-clear heat resistant films for qPCR, 50 µm thick	100
391-1295	VWR Collection	Ultra-clear heat resistant films for for raised rim qPCR plates, 50 µm thick	100
732-7509	Axygen	UltraClear sealing film for PCR plates	100

VWR COLLECTION

Delivering High Quality & Superior Performance

Please contact your local VWR sales office or
go to www.vwr.com for the latest news and special offers

ALL YOU NEED FOR LIQUID HANDLING



Request our
accompanying
publication
'All you need
for Liquid Handling'



Flasks and Cylinders

**Pipettes, Burettes and
Accessories**

Dispensers and Burettes

Pipettes, Steppers and Tips

Straw Pipettes

Reagent Reservoirs

Robotic Tips

Microplate heat sealer, ALPS™ 50V

Thermo Scientific



Heat sealing offers superior sample protection of storage and reaction plates in applications including compound storage, sample archiving and PCR. The ALPS™ 50V manual microplate heat sealer is designed to provide sealing consistency in low throughput applications.

- Provides secure, tight seals around individual wells eliminating sample loss through evaporation and cross-contamination between wells
- Compact and portable
- Simple touch pad controls adjust sealing temperature and time, and audible alarm indicates sealing completion
- Ergonomic counter lever handle design reduces operator effort and minimises strain
- Able to seal a wide range of plates of differing heights when supported by plate carriers (available separately)

Operating humidity range (%)	20 - 80% non condensing
Operating temperature range (°C)	18...30
Temperature set range (°C)	125 °C to 200 °C in 1 °C increments
Time set point range (s)	1 to 9 seconds in 0,5 second increments
WxDxH (mm)	220x321x425
Weight (kg)	7,2

Delivery information: Supplied with plate carrier for non skirted PCR plates (which is also available separately).

Description	Pk	Cat. No.
ALPS™ 50V	1	732-0996

Sealing films and foils, in sheets

Description	Pk	Cat. No.
Thermo-Seal, 85x135 mm, 100 sheets	100	732-4820
Easy Pierce foil, 80x125 mm, 100 sheets	100	732-4866
Easy Pierce foil, 20 µm, 85x135 mm, 100 sheets	100	732-0840
Easy Peel, 85x135 mm, 100 sheets	100	732-4860
Clear Seal Diamond, 85x135mm, 100 sheets	100	732-4890
Clear Seal 3730, perforated, 85x135 mm, 100 sheets	100	732-0841
Clear Seal Strong, 85x135 mm, 100 sheets	100	732-0618

Accessories

Description	Pk	Cat. No.
Plate carrier for non skirted PCR plates	1	731-0251
Plate carrier, 384-well	1	732-0380
Standard microtitre plate carrier	1	732-0393



Automated microplate heat sealer, ALPS™ 3000

Thermo Scientific



The ALPS™ 3000 microplate heat sealer is a fast, compact heat sealer created for optimal robotic integration in high throughput environments, whilst allowing manual, bench top control.

- Seals are top-loaded and easily accessible, with rapid plate sealing action
- Touch screen technology for easy operation and clear fault diagnosis
- Equipped with both on-board touch screen operation for bench top use and an RS232 port and included programming parameters for robotic integration
- Sensors detect the presence of sealing tape, microplate and air input, allowing automatic system shut-off to eliminate product waste, system hold-ups and potential injury
- Can be integrated with the majority of commercially available plate stackers

Air input pressure (psi/bar)	80 psi (5,5 bar) - 87 psi (5,7 bar)
Air requirement (l/min)	50
Operating temperature range (°C)	15..40
Sealing time (sec)	6 to 12 seconds per plate
Sealing temperature range (°C)	Ambient to 200 °C
Sealing plate height (mm)	8 - 46
W×D×H (mm)	185×414×350
Weight (kg)	12

Delivery information: Supplied with plate carrier for non skirted PCR plates, 3 plate carrier inserts, anti-surge fuses, 2 vacuum cups, 3 m air line, film loading tool, RS232 communications cable, power cable and operation manual.

Description	Pk	Cat. No.
ALPS™ 3000	1	731-0201
Sealing films and foils, in rolls		
Description	Pk	Cat. No.
Thermo-Seal, 78 mm×370 m	1	732-0842
Easy Pierce 20 µm, 78 mm×610 m	1	732-0843
Easy Pierce foil, 78 mm×610 m	1	732-0844
Easy Peel foil, 78 mm×610 m	1	732-0845
Clear Seal 3730, 78 mm × 610 m	1	732-0846
Clear Seal Strong, 78 mm×610 m	1	731-0240
Clear Seal Diamond, 78 mm×370 m	1	732-0847
Accessories		
Description	Pk	Cat. No.
Foil stripper	1	293-2113

VWR.COM
TALKING YOUR LANGUAGE



The local website with global reach

UV PCR cabinets and workstations, UV3



Construction: stainless steel coated and acrylic panels

Multifeatured equipment for eliminating PCR contamination. PCR equipment brings together UV irradiation and antimicrobial stainless steel to create a dual-attack environment against PCR contamination. Filtered and sterilised air treated by the UV/HEPA system flows into the PCR chamber. Control potential PCR contamination with built-in UV to inactivate DNA between experiments. Shortwave UV can be used as a standard laboratory practice to reduce surface and airborne contaminants in the chamber.

The UV/HEPA units feature four-stage filters:

- Pre-filter helps to preserve the life of other filters by capturing large dust particles
- Carbon-filter removes ozone, gases, odour and smoke
- HEPA-filter provides a barrier (99,99%) against dust, bacterial and mould down to 0,3 μ particles
- ZerOzone ozone catalyst grid reduces significant amounts of ozone, minimising the degrading effects of ozone on microarray data. The catalyst grid supplies a gentle airflow onto the sample work area. This airflow creates a working environment that helps to block entry of unwanted contaminants onto PCR samples.
- HEPA duct features antimicrobial coated stainless steel that resists bacteria growth
- Side access with a slide out design makes changing filters and UV tube easy
- Duct includes a shortwave (254 nm) ultraviolet tube for eliminating airborne microbes

Model	UV3 Cabinet	UV3 Workstation
Filter	Pre-filter Carbon filter HEPA filter ZerOzone catalyst grid	Pre-filter Carbon filter HEPA filter ZerOzone catalyst grid
UV lamp	254 nm	254 nm
Shelves	2 (small)	2 (small)

Delivery information: This equipment is not assembled for delivery.

Description	WxDxH ext. (mm)	Pk	Cat. No.
PCR Cabinet UV3	544x610x826	1	132-0684
PCR Workstation UV3	737x610x826	1	132-0685

**PIPETTE CALIBRATION
AT VWR INTERNATIONAL**

**VWR
PIPET SERVICES™**



W

**All brands and all models
calibrated by certified technicians.**



Thermal Cyclers, Techne® ³Prime



The ³Prime personal cycler offers easy programming and instrument flexibility, whilst maintaining the rapid ramp rates and small footprint that make it ideal for research and teaching laboratories. Using a colour touch screen and ready-to-go templates the user is intuitively guided to create even complicated programs, with a methodology that is standardised across the whole Techne® thermal cycler range.

The ³PrimeX mid-sized cyclers deliver all the features of the ³Prime instrument but with an expanded sample capacity, accommodating 48×0,2 ml microtubes, 30×0,5 ml tubes plus half a 96 well plate in a horizontal format. Gradient cycling can be achieved directly using the ³PrimeG instrument or by upgrading the ³PrimeX unit.

The ³PrimeG is a small gradient thermal cycler that builds on all the features of the ³PrimeX instrument. The 48 well block format offers eight columns for annealing temperature optimisation and six rows for optimising reagents such as MgCl₂ and primer concentrations. Annealing temperatures can be optimised over 14 °C between temperatures 30 °C to 80 °C. The gradient calculator function displays the temperature for each of the eight columns, ensuring easy replication of thermal conditions.

- Colour touch screen for fast programme set up
- Fast ramp rate of up to 3,0 °C/sec
- Temperature range 4 °C to 100 °C
- Gradient cycling is available directly using the ³PrimeG instrument or by upgrading the ³PrimeX unit
- Protocols and temperature logs transferred between instruments and PC via USB

Model	³ Prime	³ PrimeX	³ PrimeG
Block accuracy (°C)	<±0,25*	<±0,25*	<±0,25*
Block homogeneity (°C)	<±0,3*	<±0,3*	<±0,3*
Gradient span (max/min) (°C)	-	can be upgraded to ³ PrimeG specification	14 / 1
Gradient temperature range (°C)	-	can be upgraded to ³ PrimeG specification	30 - 80
Interfaces	3,5" VGA touch screen	3,5" VGA touch screen	3,5" VGA touch screen
Lid temperature range (°C)	Selectable 100 to 115 °C or off	Selectable 100 to 115 °C or off	Selectable 100 to 115 °C or off
Power (W)	155	155	155
Programmes	≤1000	≤1000	≤1000
Ramp rate (°C/sec)	3,0	3,0	3,0
Temperature range (°C)	4...100	4...100	4...100
W×D×H (mm)	210×350×180	210×350×180	210×350×180
Weight (kg)	6,0	6,0	6,0

Description	Pk	Cat. No.
³ Prime thermal cycler, 24×0,2 ml	1	732-1612
³ Prime thermal cycler, 18×0,5 ml	1	732-1610
³ PrimeG gradient thermal cycler, 48×0,2 ml	1	732-1608
³ PrimeG gradient thermal cycler, 30×0,5 ml	1	732-1607
³ PrimeX thermal cycler, 48×0,2 ml	1	732-1606
³ PrimeX thermal cycler, 30×0,5 ml	1	732-1604
³ PrimeX upgrade	1	732-1602

Replacement blocks

Exchange of thermal cycler blocks must be carried out by a trained service engineer.

Description	Pk	Cat. No.
³ Prime block, 24×0,2 ml	1	732-1611
³ Prime block, 18×0,5 ml	1	732-1609
³ PrimeX block, 48×0,2 ml	1	732-1605
³ PrimeX block, 30×0,5 ml	1	732-1603

* Recorded at 55 °C

Thermal Cyclers, Techne® Prime



732-0663



732-1021



The Prime range of full-sized thermal cyclers delivers both high performance and high throughput to provide maximum flexibility when processing a large number of samples in parallel.

The PrimeG is a gradient enabled thermal cycler with all the features of the Prime unit. The wide linear gradient with a range of 30 °C allows annealing temperatures to be optimised in one experiment. The gradient calculator function displays the temperature for each of the eight columns, ensuring easy replication of thermal conditions.

- Colour touch screen for fast programme set up
- Fast ramp rate of up to 3,4 °C/sec
- Versatile, fully interchangeable block system allows exchange in seconds without the need of tools
- USB port enables the transfer of programmes between instruments and temperature logs to your PC
- Gradient cycling is available directly using the PrimeG instrument or by upgrading the Prime unit

Model	Prime	PrimeG
Block accuracy (°C)	<±0,2*	<±0,2*
Block homogeneity (°C)	<±0,3*	<±0,3*
Gradient span (max/min) (°C)	can be upgraded to PrimeG specification	29 (19 for 384) / 1
Gradient temperature range (°C)	can be upgraded to PrimeG specification	30 - 80
Interfaces	5,7" VGA touch screen	5,7" VGA touch screen
Lid temperature range (°C)	Selectable 100 to 115 °C or off	Selectable 100 to 115 °C or off
Power (W)	450	450
Programmes	≤1000	≤1000
Ramp rate (°C/sec)	3,4	3,4
Temperature range (°C)	4...100	4...100
WxDxH (mm)	240×420×240	240×420×240
Weight (kg)	9,4	9,4

Description	Pk	Cat. No.
Prime thermal cycler, 96×0,2 ml	1	732-1601
Prime thermal cycler, 60×0,5 ml	1	732-1599
Prime thermal cycler, 384-well plates	1	732-1597
PrimeG gradient thermal cycler, 96×0,2 ml	1	732-1595
PrimeG gradient thermal cycler, 60×0,5 ml	1	732-1594
Prime gradient upgrade	1	732-1593
PrimeG gradient thermal cycler, 384-wells	1	732-1592

Replacement blocks

Fully interchangeable block system allows exchange in seconds without the need for tools.

Description	Pk	Cat. No.
Prime block, 96×0,2 ml	1	732-1600
Prime block, 60×0,5 ml	1	732-1598
Prime block, 384-well plates	1	732-1596

* Recorded at 55 °C



Thermal cyclers, Arktik™

Thermo Scientific



The Arktik™ cyclers suit the needs of a dynamic laboratory where reliability and user friendliness are appreciated. It accommodates three interchangeable blocks (for 96-well, dual 48-well and 384-well plates) allowing increased flexibility. The cycler is controlled through a simple user interface with graphical representation of the cycling routine, making navigation convenient. The USB port enables protocol transfer. The heated lid temperature can be manually adjusted and set between 30 and 110 °C, or completely switched off. The heated lid over-tightening protection system prevents the user from applying too much pressure.



- Excellent thermal precision
- Easily interchangeable heating blocks
- Multiple user option with the dual 48-well block
- Accepts almost any type of standard PCR plastics
- Low noise and auto restart on power failure

Model	TCA0001	TCA0002
Block accuracy (°C)	±0,3 °C at 90 °C	±0,3 °C at 90 °C
Block homogeneity (°C)	±0,4 °C at 90 °C	±0,4 °C at 90 °C
Gradient temperature range (°C)	30 °C max.	-
Lid temperature range (°C)	30 - 100	30 - 100
Power (W)	600	600
Ramp rate (°C/sec)	3,0	3,0
Temperature range (°C)	4 - 99,9	4 - 99,9
WxDxH (mm)	290x380x290	290x380x290
Weight (kg)	10,5	10,5

Ordering information: Purchase of a heat block is required for operation of the Arktik™ thermal cycler.

Description	Pk	Cat. No.
Thermal cycler, Arktik™, base with gradient (TCA0001)	1	731-0231
Thermal cycler, Arktik™, base without gradient (TCA0002)	1	731-0232

Blocks	Pk	Cat. No.
Description	Pk	Cat. No.
2x48-well dual heating block for Arktik™ thermal cycler	1	731-0234
96-well heating block for Arktik™ thermal cycler	1	731-0233
384-well heating block for Arktik™ thermal cycler	1	731-0237

E-BUSINESS

More than just a webshop for all of your laboratory needs

Please visit us at: <http://eu.vwr.com/e-business>



Thermal cyclers, Piko®

Thermo Scientific



The Piko® thermal cyclers deliver high performance in a compact package. They allow significant reductions in PCR run times and offer an ideal solution for both conventional and fast PCR applications. The Piko® thermal cyclers are available in two different block configurations: 24-well and 96-well. The ethernet port enables connection to a PC.



- Small footprint saves lab space and easily fits on lab bench
- Fast thermal cycling - average ramp rate 5 °C/second, PCR reactions in as little as 15 minutes
- Reduced plastic consumption and lower reagent cost due to low volumes - up to four 96-well Piko® PCR plates can be snapped into a single frame producing the equivalent of a standard 384-well plate
- Excellent thermal performance with reduced sample to sample variation
- Auto restart on power failure prevents loss of valuable reactions

Model	TCP0024	TCP0096
Block accuracy (°C)	±0,2	±0,2
Block homogeneity (°C)	±0,3	±0,3
Display	Backlit LCD	Backlit LCD
Power (W)	200	200
Ramp rate (°C/sec)	>5 heating, >4,5 cooling	>5 heating, >4,5 cooling
Temperature range (°C)	4 - 99,9	4 - 99,9
WxDxH (mm)	160x170x230	160x170x230
Weight (kg)	4 (including power supply and cord)	4 (including power supply and cord)

Description	Pk	Cat. No.
Thermal cycler, Piko®, 24-well system (TCP0024)	1	731-0235
Thermal cycler, Piko®, 96-well system (TCP0096)	1	731-0236

THE CHEMICAL BRAND
FROM VWR INTERNATIONAL

VWR  

Order your free copy online at <http://eu.vwr.com/chemical>



cDNA Synthesis	78
SYBR Green qPCR	82
TaqMan Probe qPCR	86
One -Step TaqMan qRT-PCR	89
One -Step SYBR qRT-PCR	89
Reference Gene Assays	90
HRM	91
Hydrolysis Probe Genotyping	92
microRNA Profiling	93
qPCR cyclers	94

Real Time PCR

Real Time PCR

cDNA Synthesis

Masterscript kit

5 PRIME

The Masterscript RT enzyme features a recombinant homo-dimeric viral reverse transcriptase for synthesising cDNAs of up to 12,5 kb. The post-translationally modified Masterscript RT is thermostable at a temperature of up to 65 °C, a feature that permits cDNA synthesis from RNA template with a complex secondary structure or high GC-contents.

- Full length cDNA fragments up to 12 kb
- Highly sensitive reverse transcription from low RNA amounts
- Reverse transcription at high temperature
- Complete kit with Stop RNase inhibitor and dNTPs

Product comprises: Masterscript RT enzyme (15 U/µl), RT-PCR buffer with 25 mM magnesium, Stop RNase inhibitor solution, 10 mM dNTP mix, RNase-free water

Description	Pk	Cat. No.
Masterscript kit, 50 reactions	50 Tests	733-0108

cDNA synthesis, qScript™

Quanta Biosciences



qScript™ cDNA SuperMix

qScript™ cDNA SuperMix is an easy to use solution for 2-step RT-PCR. This one-tube supermix contains all components for cDNA synthesis including buffer, dNTPs, MgCl₂, primers, RNase inhibitor, qScript™ Reverse Transcriptase and stabilisers. Only RNA needs to be added. Complete cDNA synthesis is achieved in 40 minutes. Consistency and reproducibility are achieved over a broad dynamic range regardless of RNA input. In addition, qScript™ cDNA SuperMix offers excellent sensitivity and accurate representation of low abundance genes. The supermix format eliminates multiple component additions providing exceptional reproducibility and precision. qScript™ cDNA SuperMix is available in both single tube or 96-well format.

qScript™ Flex cDNA Kit

qScript™ Flex cDNA kit is an easy to use format for first-strand cDNA synthesis that supports multiple RNA priming strategies. The qScript™ Flex reaction mix (5X) is optimised for use with oligo dT, random or gene-specific primers in any combination. A proprietary cDNA-priming enhancer that improves sensitivity is provided pre-mixed with random and oligo dT primers, and in a separate tube for use with gene-specific primers (user provided). qScript™ Reverse Transcriptase is provided in a separate tube.

- Supermix format ideal for high throughput applications
- Unbiased representation gives confidence that RNA is represented accurately in the resulting cDNA
- Broad dynamic range ensures data from precious samples is more reliably attained
- Choice of priming methods to suit individual needs

Description	Pk	Cat. No.
qScript™ cDNA SuperMix, 25 reactions	1 Kit	733-1176
qScript™ cDNA SuperMix, 100 reactions	1 Kit	733-1177
qScript™ cDNA SuperMix, 500 reactions	1 Kit	733-1178
qScript™ cDNA SuperMix, 5×96-well plate	5	733-1179
qScript™ Flex cDNA kit, 25 reactions	1 Kit	733-1180
qScript™ Flex cDNA kit, 100 reactions	1 Kit	733-1181

cDNA Synthesis kit, DyNAmo™, Finnzymes

Thermo Scientific

The DyNAmo™ cDNA Synthesis kit is intended for cDNA synthesis for two-step quantitative reverse transcription-PCR (qRT-PCR) applications, where amplicons are usually around 100 bp in length. This kit can be used in conjunction with DyNAmo™ qPCR kits or with any other qPCR kit suitable for the application.

The DyNAmo™ cDNA Synthesis kit includes all necessary reagents for cDNA synthesis to be used in qPCR. Either total RNA, messenger RNA, viral RNA or *in vitro* transcribed RNA can be used as a template for reverse transcription. The kit includes both random primers and oligo(dT) primers. The user can choose either of these or alternatively use gene-specific primers. The reverse transcriptase in the kit is M-MuLV RNase H+, which provides higher sensitivity to qPCR than RNase H- reverse transcriptases.

- Broad dynamic range: up to 1 µg of RNA
- Reliable results with different RNA sources: mRNA, total RNA, viral RNA and *in vitro* transcribed RNA
- Flexible: all priming options for cDNA synthesis
- Optimised 2X mix for cDNA synthesis
- Convenient to use: short protocol

Delivery information: Kit contains M-MuLV RNase H+ reverse transcriptase (includes RNase inhibitor), 2X RT buffer (includes dNTP mix and 10 mM MgCl₂), random hexamers (300 ng/µl), oligo(dT)₁₅ primer (100 ng/µl).

Description	Pk	Cat. No.
DyNAmo™ cDNA Synthesis kit, 100×20 µl reactions	1 KIT	FINRF-470L
DyNAmo™ cDNA Synthesis kit, 20×20 µl reactions	1 KIT	FINRF-470S

M-MuLV Reverse Transcriptase, Fermentas

Thermo Scientific

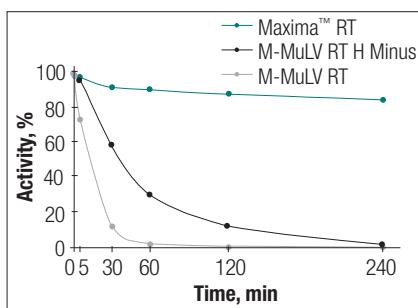
M-MuLV Reverse Transcriptase (RT) is an RNA- and DNA-dependent DNA polymerase. It can use either RNA or DNA to prime DNA synthesis. Applications include first strand cDNA synthesis for RT-PCR and real time RT-PCR, synthesis of cDNA for cloning and expression, and generation of labelled cDNA probes for microarrays.

- High yields of first strand cDNA up to 9 kb
- Optimum activity at 37 °C
- Incorporates modified nucleotides (e.g., Cy3-, Cy5-, rhodamine-, aminoallyl-, fluorescein-labelled nucleotides)

Description	Pk	Cat. No.
M-MuLV Reverse Transcriptase, 5000 units (20 U/μl)	1 KIT	FERMEP0351

Maxima™ Reverse Transcriptase, Fermentas

Thermo Scientific



Maxima™ Reverse Transcriptase is an advanced enzyme derived by *in vitro* evolution of M-MuLV RT for RT-qPCR application. The enzyme features high thermostability, robustness and increased synthesis rates in RT-qPCR. The Maxima™ Reverse Transcriptase is capable of cDNA synthesis at elevated temperatures (50 to 60 °C) and completion of the reverse transcription reaction in 15 to 30 minutes. The use of this enzyme in combination with Maxima™ qPCR Master Mixes ensures high specificity, sensitivity and wide linear range of two step RT-qPCR. Applications include first strand cDNA synthesis, RT-PCR, and RT-qPCR.

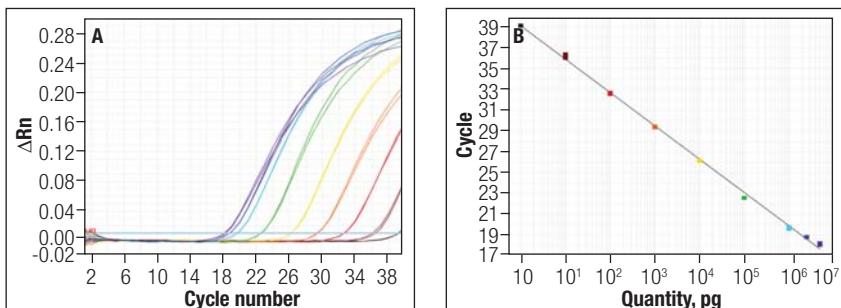
- Thermostable – 90% active after incubation at 50 °C for 60 minutes in a reaction mixture
- Active up to 60 °C
- High yields of full-length cDNA as long as 20 kb
- Efficient – complete cDNA synthesis in 15 to 30 minutes
- Incorporates modified nucleotides
- Developed through *in vitro* evolution

Delivery information: Supplied with 5X RT Buffer.

Description	Pk	Cat. No.
Maxima™ Reverse Transcriptase, 2000 units (200 U/μl)	1 KIT	FERMEP0741
Maxima™ Reverse Transcriptase, 10 000 units (200 U/μl)	1 KIT	FERMEP0742
Maxima™ Reverse Transcriptase, 4×10 000 units (200 U/μl)	1 KIT	FERMEP0743

Maxima™ First Strand cDNA Synthesis kit, Fermentas

Thermo Scientific



The Maxima™ First Strand cDNA Synthesis kit is a convenient system optimised for use as a first step in two step RT-qPCR. The kit includes the Maxima™ Reverse Transcriptase, which is an advanced enzyme derived by *in vitro* evolution of M-MuLV RT for RT-qPCR application. The enzyme features high thermostability, robustness and increased synthesis rates in RT-qPCR. The Maxima™ First Strand cDNA Synthesis kit is capable of cDNA synthesis at elevated temperatures (50 to 60 °C) and completion of the reverse transcription reaction in 15 minutes. In addition, the kit offers highly convenient composition, where Maxima™ Reverse Transcriptase and RiboLock™ RNase Inhibitor are premixed, while all other reaction components: reaction buffer, dNTPs and primers (random hexamers and Oligo(dT)₁₈) are premixed in another tube as a 5X reaction mix.

- Increased reaction temperatures – up to 60 °C
- Premixed components for convenient use in RT-qPCR
- Increased synthesis rate – complete cDNA synthesis in 15 minutes
- High sensitivity and specificity

Delivery information: Kit includes Maxima™ enzyme mix, 5X reaction mix, nuclease-free water, and detailed protocol.

Description	Pk	Cat. No.
Maxima® First Strand cDNA Synthesis kit for RT-qPCR, 50 reactions	1 KIT	FERMK1641
Maxima® First Strand cDNA Synthesis kit for RT-qPCR, 200 reactions	1 KIT	FERMK1642

Real Time PCR

cDNA Synthesis

Ready-To-Go™ T-Primed First-Strand kit

GE Healthcare

Ready-To-Go™ T-Primed First-Strand kit has been designed to provide all the reagents necessary to generate full length first-strand cDNA from an mRNA template using an oligo(dT) primer containing a Not I restriction site. The components in the kit are provided in a room-temperature-stable format such that after reconstitution, each first-strand reaction mix is ready for immediate use in a first strand cDNA reaction. First-strand cDNA generated with this kit can be used as a template for standard Gubler-Hoffman second-strand cDNA synthesis or for amplification by PCR.

- Pre-formulated, ambient-temperature-stable, single-dose glassified reaction mixes minimise pipetting errors, avoid potential cross-contamination of subsequent PCR products, and ensure optimal performance from each reaction
- Predispensed reaction mixes are highly suitable for research applications which use PCR to detect and quantify eukaryotic RNA species isolated from a variety of cell sources and tissue samples
- Reaction mixes include NotI-(dT)₁₈ primer in sufficient quantity to serve as a downstream PCR primer for performing 3'-RACE. Final reaction volume is 33 µl once reconstituted

Description	Pk	Cat. No.
Ready-To-Go™ T-Primed First-Strand kit	50 Tests	27-9263-01

Ready-To-Go™ You-Prime First-Strand beads

GE Healthcare

Ready-To-Go™ You-Prime First-Strand beads are preformulated, single-dose reaction beads prepackaged in thin-walled 0,5 ml tubes compatible with most thermal cyclers. Ready-To-Go™ You-Prime First-Strand beads are used for synthesis of first-strand cDNA templates from total RNA or polyadenylated RNA using a primer of choice.

- Pre-dispensed, single-dose reaction beads minimise pipetting errors, avoid cross-contamination, and ensure optimal performance
- First-strand reaction beads contain no primer, thus allowing users to select a first-strand primer of choice
- Highly suitable for research applications that use PCR to detect and quantify eukaryotic RNA from a variety of samples
- Reaction beads are function tested for first-strand synthesis of cDNA up to 7.5 kb and in RT-PCR from blood samples
- Completed reactions (33 µl final volume) can be used directly in PCR after adding water, *Taq* DNA polymerase, and primers; first-strand cDNA can also be used as a template for traditional Gubler-Hoffman second-strand cDNA synthesis

Description	Pk	Cat. No.
Ready-To-Go™ You-Prime First-Strand beads, 55 reactions	50 Tests	27-9264-01

Oligo(dT)₁₈ primer, Fermentas

Thermo Scientific

Oligo(dT)₁₈ primer is a synthetic single-stranded 18-mer oligonucleotide with 5'- and 3'-hydroxyl ends. The primer is supplied as a ready to use, 20X concentrated aqueous solution. Oligo(dT)₁₈ primer has been functionally tested in first strand cDNA synthesis.

Description	Pk	Cat. No.
Oligo(dT) ₁₈ primer, 60 µl/30 µg (100 µM)	1 KIT	FERMS0131
Oligo(dT) ₁₈ primer, 120 µl/60 µg (100 µM)	1 KIT	FERMS0132

Random hexamer primer, Fermentas

Thermo Scientific

Random hexamer primer is a mixture of single-stranded random hexanucleotides with 5'- and 3'-hydroxyl ends. The primer is supplied as a ready to use, 20X concentrated aqueous solution. Random hexamer primer has been functionally tested in first strand cDNA synthesis.

Description	Pk	Cat. No.
Random hexamer primer 24 µg (100 µM)	1 KIT	FERMS0142

Masterscript RT-PCR system

5 PRIME

The Masterscript RT-PCR system is designed to offer maximum flexibility with just one kit: First strand cDNA synthesis, one-step RT-PCR and two-step RT-PCR. The PCR enzyme mix is a blend of DNA polymerases with a high extension rate and a DNA polymerase with proofreading function. In combination with the tuning buffer, the Masterscript PCR enzyme mix guarantees robust amplification of very long cDNAs with high fidelity.

- High yield reverse transcription and optimised PCR reaction
- Proofreading PCR enzyme mix for long-range RT-PCR up to 12 kb
- Minimal optimisation with self adjusting Mg²⁺ buffer technology
- Complete kit with Stop RNase inhibitor and dNTPs

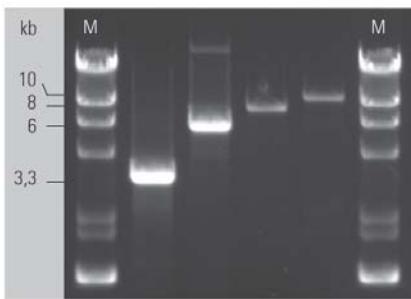
Kit comprises: Masterscript RT enzyme (15 U/µl), Masterscript PCR enzyme mix (5 U/µl), RT-PCR buffer (with Mg²⁺), Stop RNase inhibitor solution, 10X tuning buffer (with Mg²⁺), dNTP mix, and RNase-free water.

Description	Pk	Cat. No.
Masterscript RT-PCR system	20 Tests	733-0110

100 Tests	733-0998
-----------	----------

Phusion® RT-PCR kit, Finnzymes

Thermo Scientific



Phusion® RT-PCR kit is a complete two-step kit designed for high fidelity RT-PCR. The kit contains the full set of reagents required for performing cDNA synthesis and PCR in two steps. In the first step, a variety of RNA templates and all priming options may be used for efficient synthesis of cDNA with M-MuLV Reverse Transcriptase. In the second step, Phusion® Hot Start II High-Fidelity DNA polymerase is used for cDNA amplification. This polymerase is extremely accurate and robust, and the Hot Start modification guarantees additional specificity in PCR. The superior features of Phusion® Hot Start II DNA polymerase enable accurate cDNA amplification with high yields and short cycling times. Phusion® RT-PCR Kit is an ideal choice when producing cDNA for cloning and gene expression studies.

- High yields for a broad range of RT-PCR products
- Accurate amplification of cDNA with Phusion® Hot Start II DNA polymerase (52-fold *Taq* fidelity)

• Short and simple cDNA synthesis and PCR protocols

• Easy to use; the kit includes all necessary components for performing cDNA synthesis and PCR

Delivery information: Each kit includes RT enzyme mix (M-MuLV RNase H+ and RNase inhibitor), 10X RT buffer (includes 50 mM MgCl₂, which provides 5 mM MgCl₂ in 1X reaction concentration), oligo(dT)₁₅ primer (100 ng/μl), random hexamers (50 ng/μl), dNTP mix (10 mM), Phusion® Hot Start II DNA polymerase (2 U/μl), 5X Phusion® HF Buffer, control RNA with carrier (10 ng MS2 RNA/μl, 30 μg *E. coli* ribosomal RNA/ml), and control primer mix.

Description	Pk	Cat. No.
Phusion® RT-PCR kit, 20 reactions	1 KIT	FINRF-546S
Phusion® RT-PCR kit, 100 reactions	1 KIT	FINRF-546L

illuстра™ Ready-To-Go™ RT-PCR beads

GE Healthcare



illuстра™ RT-PCR is commonly used to amplify cDNA by combining first-strand cDNA synthesis of an RNA template with PCR amplification. Typically the reaction is performed in two steps. A first-strand cDNA reaction is performed, the resulting cDNA is then transferred to another tube containing *Taq* DNA polymerase and PCR buffer where the reaction mixture is subjected to multiple cycles of denaturation, annealing and elongation, resulting in the exponential amplification of the target cDNA. Ready-To-Go™ RT-PCR beads simplify this process to a single-tube, single-reaction procedure.

Ready-To-Go™ RT-PCR beads have been optimised for RT-PCR. Each room-temperature-stable bead contains M-MuLV Reverse Transcriptase, RNase inhibitor, buffer, nucleotides and *Taq* DNA polymerase. The only additional reagents required are water, template RNA, and primers.

The Ready-To-Go™ bead format significantly reduces the number of pipetting steps, thereby increasing reproducibility of the RT-PCR technique and minimising risk of contamination and RNA degradation. Ready-To-Go™ RT-PCR beads are provided in either thin walled 0,5 ml or 0,2 ml tubes compatible with most thermocyclers. The 0,2 ml tubes come assembled in a 96-well (8×12) plate format that allows individual strips of eight tubes to be easily removed. This flexibility allows use of either the entire 96-well plate, strips of eight or individual 0,2 ml tubes. Each package of Ready-To-Go™ RT-PCR beads contains: RT-PCR beads, control reactions and pd(N)₆ and oligo(dT) cDNA primers.

- Pre-formulated, pre-dispensed, single-dose, ambient-temperature-stable beads ensure greater reproducibility between reactions, minimise pipetting steps and reduce the potential for pipetting errors and contamination
- Optimised as a one-tube, one-step RT-PCR reaction for both cDNA synthesis and PCR using only one buffer and primer set - no need to open the tube or change conditions between steps
- Each lot of RT-PCR beads is function tested for its ability to generate highly specific PCR products to ensure lot-to-lot reproducibility

Description	Pk	Cat. No.
illuстра™ Ready-To-Go™ RT-PCR beads (0,2 ml tubes)	96 Tests	27-9267-01
illuстра™ Ready-To-Go™ RT-PCR beads (0,2 ml hinged tubes with cap)	96 Tests	27-9259-01
illuстра™ Ready-To-Go™ RT-PCR beads (0,5 ml tubes)	100 Tests	27-9266-01

qPCR Mixes, PerfeCTa™ SYBR® Green SuperMixes and FastMixes™

Quanta Biosciences



PerfeCTa™ SYBR® Green SuperMixes are 2X concentrated, ready to use reaction cocktails containing all components for qPCR, except primers and template. A key component of these SuperMixes is AccuStart™ Taq DNA polymerase, which enables specific and efficient primer extension with the convenience of room temperature reaction assembly. AccuStart™ Taq DNA polymerase contains monoclonal antibodies that bind to the polymerase and keep it inactive prior to the initial PCR denaturation step. Upon heat activation the antibodies denature irreversibly, releasing fully active and unmodified Taq DNA polymerase.

PerfeCTa™ SYBR® Green FastMixes™ are 2X concentrated, ready to use reaction mixes delivering maximum PCR efficiency, sensitivity, specificity and robust fluorescent signal using either fast or conventional cycling protocols. Rapid cycling is achieved by instant activation of AccuStart™ Taq DNA polymerase coupled with rapid polymerisation kinetics. High performance qPCR can be achieved in as little as 33 minutes.

- FastMixes™ offer shorter run times enabling more experiments per day
- Broad dynamic range ensures data from precious samples is more reliably attained
- Superior antibody-mediated Hot Start results in higher specificity leading to more accurate quantification

- Fast Cycling using existing primer sets means no re-optimisation and increased productivity

Description	Pk	Cat. No.
PerfeCTa™ SYBR® Green SuperMixes and FastMixes™ with ROX reference dye		
SuperMix, 100 reactions	1 Kit	733-1249
SuperMix, 500 reactions	1 Kit	733-1250
SuperMix, 2000 reactions	1 Kit	733-1251
FastMix™, 250 reactions	1 Kit	733-1385
FastMix™, 1250 reactions	1 Kit	733-1386
FastMix™, 5000 reactions	1 Kit	733-1387
PerfeCTa™ SYBR® Green SuperMixes and FastMixes™ with low ROX reference dye		
SuperMix, 100 reactions	1 Kit	733-1253
SuperMix, 500 reactions	1 Kit	733-1254
SuperMix, 2000 reactions	1 Kit	733-1255
FastMix™, 250 reactions	1 Kit	733-1389
FastMix™, 1250 reactions	1 Kit	733-1390
FastMix™, 5000 reactions	1 Kit	733-1391
PerfeCTa™ SYBR® Green SuperMixes and FastMixes™ with Fluorescein reference dye		
SuperMix, 100 reactions	1 Kit	733-1195
SuperMix, 500 reactions	1 Kit	733-1196
SuperMix, 2000 reactions	1 Kit	733-1197
FastMix™, 250 reactions	1 Kit	733-1377
FastMix™, 1250 reactions	1 Kit	733-1378
FastMix™, 5000 reactions	1 Kit	733-1379
PerfeCTa™ SYBR® Green SuperMixes and FastMixes™ without passive reference dye		
SuperMix, 100 reactions	1 Kit	733-1199
SuperMix, 500 reactions	1 Kit	733-1246
SuperMix, 2000 reactions	1 Kit	733-1247
FastMix™, 250 reactions	1 Kit	733-1381
FastMix™, 1250 reactions	1 Kit	733-1382
FastMix™, 5000 reactions	1 Kit	733-1383

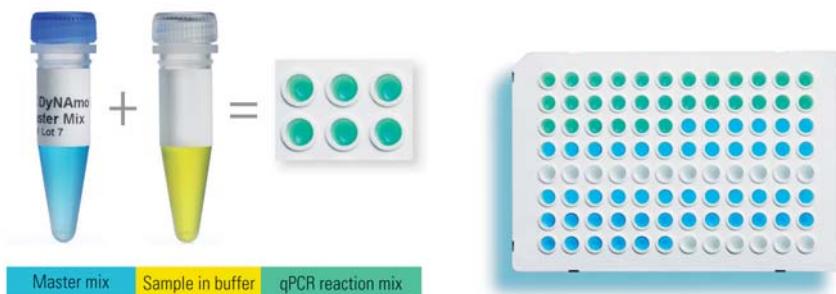
INSTRUMENT SERVICE AND MAINTENANCE

Please contact your local VWR sales office for more information



qPCR SYBR® Green kits, DyNAmo™, Finnzymes

Thermo Scientific



DyNAmo™ qPCR kits offer excellent performance in detection and quantitation of DNA and RNA sequences from various sources. The DyNAmo™ qPCR kit family features optimised kits for fast and conventional qPCR. Kits utilising either SYBR® Green or probe chemistries for various platforms are available. All DyNAmo™ qPCR kits are provided as convenient 2X master mixes - only template and primers need to be added.

DyNAmo™ ColorFlash SYBR® Green qPCR kits

DyNAmo™ ColorFlash SYBR® Green qPCR kits are a superior choice for fast, quantitative real time analysis. DyNAmo™ ColorFlash SYBR® Green qPCR kits are designed to ease qPCR set up and minimise errors by providing a simple way to track pipetting of reaction components.

DyNAmo™ ColorFlash SYBR® Green qPCR kits utilise a 2X master mix supplemented with a blue dye, and a separate sample buffer containing a yellow dye. The qPCR reaction mix containing both components is green. Using this multicolour system, pipetting of both the master mix and the sample can be easily monitored. This significantly decreases the risk for pipetting errors during reaction set up, even when using white reaction vessels. The dyes do not affect the specificity or sensitivity of qPCR assays.

- Minimised risk of pipetting errors during reaction set up
- Also beneficial when using white reaction vessels
- Extremely fast protocols due to combined annealing and extension step of only 15 seconds
- Specific and sensitive detection of a wide range of template concentrations
- dUTP included in the 2X master mix allows the use of UNG for prevention of carry-over contamination
- Licensed for qPCR

Delivery information: All DyNAmo™ ColorFlash SYBR® Green qPCR kits include 2X master mix with blue dye (containing Hot Start version of a modified *Tbr* DNA polymerase, SYBR® Green I, optimised PCR buffer, 5 mM MgCl₂, dNTP mix including dUTP), 40X sample buffer solution with yellow dye, and 50X ROX passive reference dye.

Description	Pk	Cat. No.
DyNAmo™ ColorFlash SYBR® Green qPCR kit, 40×50 µl reactions	1 KIT	FINRF-416S
DyNAmo™ ColorFlash SYBR® Green qPCR kit, 200×50 µl reactions	1 KIT	FINRF-416L
DyNAmo™ ColorFlash SYBR® Green qPCR kit, 1000×50 µl reactions	1 KIT	FINRF-416XL

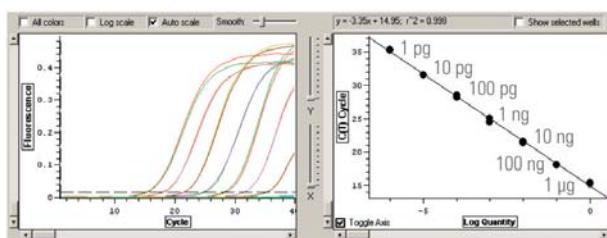
VWR COLLECTION

Delivering High Quality & Superior Performance

Please contact your local VWR sales office or
go to www.vwr.com for the latest news and special offers

Real Time PCR

SYBR® Green qPCR



DyNAmo™ Flash SYBR® Green qPCR kits

DyNAmo™ Flash SYBR® Green qPCR kit and DyNAmo™ Flash Probe qPCR kit offer enhanced performance for real time qPCR. These kits provide sensitive and reproducible detection of target DNA with shorter run times in both fast and conventional instruments.

DyNAmo™ Flash SYBR® Green qPCR kit provides qPCR results faster than other SYBR® Green kits without compromising the qPCR performance. A DNA-binding domain attached to the polymerase in this kit improves the physical stability of the polymerase-DNA complex, thus enhancing the processivity and robustness of the amplification. The high amplification efficiency of DyNAmo™ Flash SYBR® Green qPCR kit gives reliable quantitation and early C(t) values. Due to the high signal intensity, DyNAmo™ Flash SYBR® Green qPCR provides an excellent signal-to-noise ratio.

- Extremely fast protocols: combined annealing and extension step of only 15 seconds
- Specific and sensitive detection of a wide range of template concentration
- Included dUTP allows the use of UNG for prevention of carry-over contamination
- Convenient 2X master mix and optimised protocols
- Validated with all major real time instruments
- Licenced for qPCR

Delivery information: All DyNAmo™ Flash qPCR SYBR® Green kits include 2X master mix (containing Hot Start version of a modified *Tbr* DNA polymerase, SYBR® Green I, optimised PCR buffer, 5 mM MgCl₂, dNTP mix including dUTP) and 50X ROX passive reference dye.

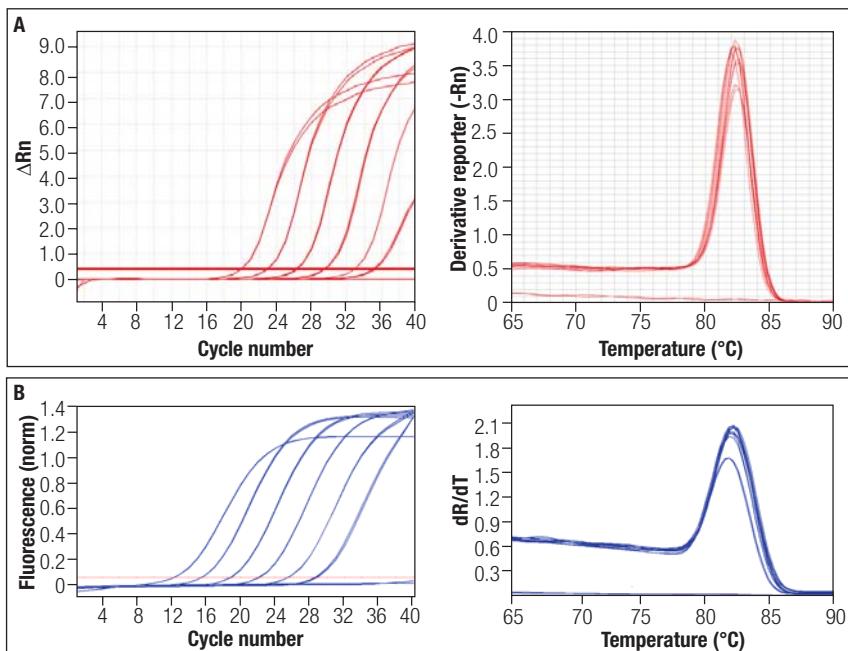
Description	Pk	Cat. No.
DyNAmo™ Flash SYBR® Green qPCR kit, 40×50 µl reactions	1 KIT	FINRF-415S
DyNAmo™ Flash SYBR® Green qPCR kit, 200×50 µl reactions	1 KIT	FINRF-415L
DyNAmo™ Flash SYBR® Green qPCR kit, 1000×50 µl reactions	1 KIT	FINRF-415XL

VWR.COM
TALKING YOUR LANGUAGE



The local website with global reach

Maxima™ SYBR® Green qPCR master mix (2X), with ROX, Fermentas Thermo Scientific



The Maxima™ SYBR Green qPCR master mix (2X) is a ready to use solution optimised for quantitative real time PCR and two-step real time RT-PCR on most real time PCR machines. The master mix includes Maxima™ Hot Start Taq DNA polymerase, SYBR® Green dye I and dNTPs in an optimised PCR buffer. ROX solution is provided in a separate vial for use with machines that require ROX as a passive reference dye. Maxima™ Hot Start Taq DNA polymerase in combination with the optimised buffer ensures PCR specificity and sensitivity. The SYBR® Green I intercalating dye allows for DNA detection and analysis without using sequence specific probes. dUTP is included in the mix for optional carryover contamination control using uracil-DNA glycosylase (UDG). The use of Maxima™ SYBR Green qPCR master mix (2X) in real time PCR ensures reproducible, sensitive and specific quantification of genomic, plasmid, viral and cDNA templates.

- Specificity – eliminates non specific amplification and formation of primer dimers
- Sensitivity – detects low copy number targets
- ROX solution provided in a separate tube
- Wide linear range – accurate quantification across 9 orders of magnitude
- Can be used on most real time PCR instruments
- Ready to use

Delivery information: Supplied with 50 µM ROX solution and nuclease-free water.

Description	Pk	Cat. No.
Maxima® SYBR Green qPCR master mix (2X), 2×1,25 ml (for 200 reactions of 25 µl), with ROX (50 µl) and 2×1,25 ml nuclease-free water	2,5 ml	FERMK0251
Maxima® SYBR Green qPCR master mix (2X), 10×1,25 ml (for 1000 reactions of 25 µl), with ROX (250 µl) and 10×1,25 ml nuclease-free water	12,5 ml	FERMK0252
Maxima® SYBR Green qPCR master mix (2X), 4×12,5 ml (for 4000 reactions of 25 µl), with ROX (1 ml) and 2×30 ml nuclease-free water	1	FERMK0253

PerfeCTa® qPCR FastMix® II**Quanta Biosciences**

PerfeCTa® qPCR FastMix® II is an advanced qPCR reagent system for both fast and conventional PCR cycling protocols or instruments. It is a versatile and robust solution that provides the ultimate sensitivity and high PCR efficiency using a variety of fluorogenic probe chemistries, including TaqMan® hydrolysis probes. PerfeCTa® qPCR FastMix® II is provided as a 2X concentrated ready to use reaction cocktail that contains all required reaction components, except primers, probe(s), and DNA template. The light blue colour of the AccuVue™ tracer dye simplifies reaction assembly in white, or clear, plates and helps to minimise pipetting or mixing errors. It does not interfere with qPCR performance or affect the stability of the product.

A key component of PerfeCTa® qPCR FastMix® II is an ultra-pure, processive thermostable DNA polymerase that is free of detectable *E. coli* DNA. PerfeCTa® qPCR FastMix® II is ideal for demanding qPCR applications such as bacterial pathogen detection where residual host DNA in typical recombinant enzyme preparations can limit assay sensitivity and obscure detection of low copy samples. The enzyme in PerfeCTa® qPCR FastMix® II is combined with high avidity monoclonal antibodies to provide a stringent automatic Hot Start that allows reaction assembly, and temporary storage, at room temperature prior to PCR amplification.

Delivery information: Kits are available with or without ROX reference dye. All kits comprise of 2X reaction buffer containing optimised concentrations of MgCl₂, dNTPs (dATP, dCTP, dGTP, dTTP), Hot Start DNA polymerase, AccuVue™ blue qPCR dye, and stabilisers.

Description	Pk	Cat. No.
PerfeCTa® qPCR FastMix® II without ROX		
PerfeCTa® qPCR FastMix II®, 250×20 µl reactions (2×1,25 ml)	250 Assays	QUNT95118-250
PerfeCTa® qPCR FastMix II®, 1250×20 µl reactions (10×1,25 ml)	1.250 Assays	QUNT95118-012
PerfeCTa® qPCR FastMix II®, 5000×20 µl reactions (1×50 ml)	5.000 Assays	QUNT95118-05K
PerfeCTa® qPCR FastMix® II with ROX		
PerfeCTa® qPCR FastMix II®, ROX, 250×20 µl reactions (2×1,25 ml)	250 Assays	QUNT95119-250
PerfeCTa® qPCR FastMix II®, ROX, 1250×20 µl reactions (10×1,25 ml)	1.250 Assays	QUNT95119-012
PerfeCTa® qPCR FastMix II®, ROX, 5000×20 µl reactions (1×50 ml)	5.000 Assays	QUNT95119-05K
PerfeCTa® qPCR FastMix® II with low ROX		
PerfeCTa® qPCR FastMix II®, low ROX, 1250×20 µl reactions (10×1,25 ml)	1.250 Assays	QUNT95120-012
PerfeCTa® qPCR FastMix II®, low ROX, 5000×20 µl reactions (1×50 ml)	5.000 Assays	QUNT95120-05K
PerfeCTa® qPCR FastMix II®, low ROX, 250×20 µl reactions (2×1.25 ml)	250 Assays	QUNT95120-250

PerfeCTa® qPCR ToughMix™**Quanta Biosciences**

PerfeCTa® qPCR ToughMix™ is a 2X concentrated ready to use reaction cocktail for PCR amplification of DNA templates that overcomes many known inhibitors of PCR often present in crude samples extracted from environmental specimens, plant tissues, or animal tissues. It is a versatile and robust real time qPCR reagent that provides maximum sensitivity and PCR efficiency with a variety of fluorogenic probe chemistries, including TaqMan® hydrolysis probes. PerfeCTa® qPCR ToughMix™ contains all required reaction components, except primers, probe(s), and DNA template. The light blue colour of the AccuVue™ tracer dye simplifies reaction assembly in white, or clear, plates and helps to minimise pipetting or mixing errors. It does not interfere with qPCR performance or affect the stability of the product.

A key component of PerfeCTa® qPCR ToughMix™ is an ultra-pure, highly processive thermostable DNA polymerase that is combined with high avidity monoclonal antibodies. This proprietary polymerase mix is highly resistant to PCR inhibitors and provides an extremely stringent automatic Hot Start allowing reaction assembly, and temporary storage, at room temperature prior to PCR amplification. PerfeCTa® qPCR ToughMix™ delivers exceptional performance with either fast or conventional PCR cycling protocols.

Delivery information: Kits are available with or without ROX reference dye. All kits comprise of 2X reaction buffer containing optimised concentrations of MgCl₂, dNTPs (dATP, dCTP, dGTP, dTTP), Hot Start DNA polymerase, AccuVue™ blue qPCR dye, and stabilisers.

Description	Pk	Cat. No.
PerfeCTa® qPCR ToughMix™ without ROX		
PerfeCTa® qPCR ToughMix®, 250×20 µl reactions (2×1,25 ml)	250 Assays	733-2092
PerfeCTa® qPCR ToughMix®, 1250×20 µl reactions (10×1,25 ml)	1.250 Assays	733-2090
PerfeCTa® qPCR ToughMix®, 5000×20 µl reactions (1×50 ml)	5.000 Assays	733-2091
PerfeCTa® qPCR ToughMix™ with ROX		
PerfeCTa® qPCR ToughMix®, ROX, 250×20 µl reactions (2×1,25 ml)	250 Assays	733-2095
PerfeCTa® qPCR ToughMix®, ROX, 1250×20 µl reactions (10×1,25 ml)	1.250 Assays	733-2093
PerfeCTa® qPCR ToughMix®, ROX, 5000×20 µl reactions (1×50 ml)	5.000 Assays	733-2094
PerfeCTa® qPCR ToughMix™ with low ROX		
PerfeCTa® qPCR ToughMix®, low ROX, 1250×20 µl reactions (10×1,25 ml)	1.250 Assays	733-2096
PerfeCTa® qPCR ToughMix®, low ROX, 5000×20 µl reactions (1×50 ml)	5.000 Assays	733-2097
PerfeCTa® qPCR ToughMix®, low ROX, 250×20 µl reactions (2×1,25 ml)	250 Assays	733-2098



qPCR SuperMix, PerfeCTa™ MultiPlex

Quanta Biosciences

This SuperMix is a 2X concentrated, ready to use reaction cocktail for real time qPCR that contains all components, except primers, probes, and templates. The system transcends multiplex limitations of conventional PCR master mixes, enabling unbiased amplification of up to five target sequences in a single tube. Suppression of low copy amplicons by high copy reference targets in the amplification is a common problem in multiplex PCR. This can skew, or mask the apparent representation and quantification of low copy target sequences. PerfeCTa MultiPlex qPCR SuperMix delivers dynamic range and sensitivity to multiplexed qPCR that is comparable to that for singleplex qPCR probe assays without the need for limiting or variable primer concentrations.

A key component of this supermix is AccuStart™ *Taq* DNA polymerase with monoclonal antibodies that bind to the polymerase and keep it inactive prior to the initial PCR denaturation step. Upon heat activation (2 minutes at 95 °C), the antibodies denature irreversibly, releasing fully active, unmodified *Taq* DNA polymerase. This enables specific and efficient primer extension with the convenience of room temperature reaction assembly.

Description	Pk	Cat. No.
qPCR SuperMix, 50 reactions	50 Assays	733-1272
qPCR SuperMix, 200 reactions	200 Assays	733-1273
qPCR SuperMix, 1000 reactions	1.000 Assays	733-2074

PerfeCTa® MultiPlex qPCR SuperMix, low ROX



PerfeCTa® Multiplex qPCR SuperMix, low ROX is a 2X concentrated, ready to use reaction cocktail that contains all components, except primers, probe(s), and template for real time qPCR on Applied Biosystems 7500 or Stratagene MX series of real time PCR systems.

PerfeCTa® Multiplex qPCR SuperMix, low ROX delivers dynamic range and sensitivity to multiplexed qPCR that is comparable to that for singleplex qPCR probe assays without the need for limiting or variable primer concentrations.

Delivery information: Each kit contains 2X reaction buffer containing optimised concentrations of MgCl₂, dNTPs (dATP, dCTP, dGTP, dTTP), AccuStart™ *Taq* DNA polymerase, ROX reference dye (for 580 to 585 nm excitation), and stabilisers.

Description	Pk	Cat. No.
PerfeCTa® Multiplex qPCR SuperMix, low ROX	50 Assays	733-2087
PerfeCTa® Multiplex qPCR SuperMix, low ROX	200 Assays	733-2088
PerfeCTa® Multiplex qPCR SuperMix, low ROX	1.000 Assays	733-2086

qPCR probe kits, DyNAamo™, Finnzymes

Thermo Scientific

DyNAamo™ qPCR kits offer excellent performance in detection and quantitation of DNA and RNA sequences from various sources. The DyNAamo™ qPCR kit family features optimised kits for fast and conventional qPCR. Kits utilising either SYBR® Green or probe chemistries for various platforms are available. All DyNAamo™ qPCR kits are provided as convenient 2X master mixes - only template and primers need to be added.

DyNAamo™ ColorFlash probe qPCR kits

DyNAamo™ ColorFlash qPCR kits are a superior choice for fast, quantitative real time analysis. DyNAamo™ ColorFlash qPCR kits are designed to ease qPCR set up and minimise errors by providing a simple way to track pipetting of reaction components.

DyNAamo™ ColorFlash qPCR kits utilise a 2X master mix supplemented with a blue dye, and a separate sample buffer containing a yellow dye. The qPCR reaction mix containing both components is green. Using this multicolour system, pipetting of both the master mix and the sample can be easily monitored. This significantly decreases the risk for pipetting errors during reaction set up, even when using white reaction vessels. The dyes do not affect the specificity or sensitivity of qPCR assays.

- Minimised risk of pipetting errors during reaction set up
- Also beneficial when using white reaction vessels
- Extremely fast protocols due to combined annealing and extension step of only 15 seconds
- Specific and sensitive detection of a wide range of template concentrations
- dUTP included in the 2X master mix allows the use of UNG for prevention of carry-over contamination
- Licensed for qPCR

Delivery information: All DyNAamo™ ColorFlash probe-based kits include 2X master mix with blue dye (containing Hot Start version of a modified *Tbr* DNA polymerase, optimised PCR buffer, 5 mM MgCl₂, dNTP mix including dUTP), 40X sample buffer solution with yellow dye, and 50X ROX passive reference dye.

Description	Pk	Cat. No.
DyNAamo™ ColorFlash probe qPCR kit, 40×50 µl reactions	1 KIT	FINRF-456S
DyNAamo™ ColorFlash probe qPCR kit, 200×50 µl reactions	1 KIT	FINRF-456L
DyNAamo™ ColorFlash probe qPCR kit, 1000×50 µl reactions	1 KIT	FINRF-456XL

Real Time PCR

TaqMan Probe qPCR

qPCR probe kits, DyNAmo™, Finnzymes

Thermo Scientific

DyNAmo™ Flash probe qPCR kits

DyNAmo™ Flash probe qPCR kit offers enhanced performance for real time qPCR. These kits provide sensitive and reproducible detection of target DNA with shorter run times in both fast and conventional instruments.

DyNAmo™ Flash probe qPCR kit is the ideal choice for fast probe-based qPCR. The optimised reagents and short cycling times deliver maximum speed thus increasing sample throughput. Significant time savings are achieved with both conventional and fast real time PCR instruments. Performance of the DyNAmo™ Flash Probe qPCR kit is based on an efficient Hot Start *Thermus brockianus* DNA polymerase. Sensitivity and the excellent amplification efficiency across a wide range of template concentrations guarantee reproducible results. DyNAmo™ Flash Probe qPCR kit is optimised for hydrolysis probes (e.g. TaqMan probes) and it can be used with both block- and capillary-based real time PCR instruments.

- Extremely fast protocols: combined annealing and extension step of only 15 seconds
- Specific and sensitive detection of a wide range of template concentration
- Included dUTP allows the use of UNG for prevention of carry-over contamination
- Convenient 2X master mix and optimised protocols
- Validated with all major real time instruments
- Licensed for qPCR

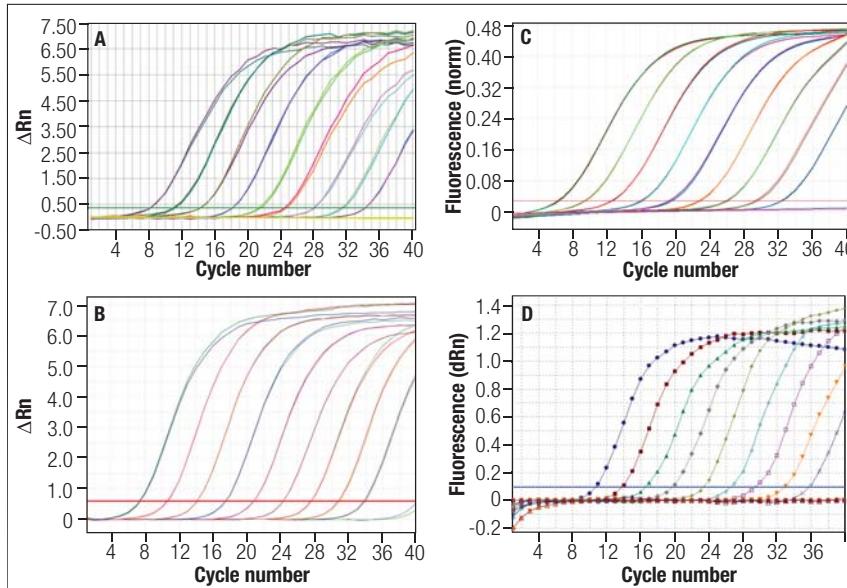
Delivery information: All DyNAmo™ Flash probe-based kits include 2X master mix (containing Hot Start version of a modified *Tbr* DNA polymerase, optimised PCR buffer, 5 mM MgCl₂, dNTP mix including dUTP) and 50X ROX passive reference dye.

Description

	Pk	Cat. No.
DyNAmo™ Flash Probe qPCR kit, 40×50 µl reactions	1 KIT	FINRF-455S
DyNAmo™ Flash Probe qPCR kit, 200×50 µl reactions	1 KIT	FINRF-455L
DyNAmo™ Flash Probe qPCR kit, 1000×50 µl reactions	1 KIT	FINRF-455XL

Maxima™ Probe qPCR master mix (2X), with ROX, Fermentas

Thermo Scientific



The Maxima™ probe qPCR master mix (2X) is a ready to use solution optimised for quantitative real time PCR and two-step real time RT-PCR on most real time PCR machines. The master mix includes Maxima™ Hot Start *Taq* DNA polymerase and dNTPs in an optimised PCR buffer. ROX solution is provided in a separate vial for use with machines that require ROX as a passive reference dye. Maxima™ Hot Start *Taq* DNA polymerase in combination with the optimised buffer ensures PCR specificity and sensitivity. dUTP is included in the mix for optional carryover contamination control using uracil-DNA glycosylase (UDG). The use of Maxima™ probe qPCR master mix (2X) in real time PCR ensures reproducible, sensitive and specific quantification of genomic, plasmid, viral and cDNA templates.

- Specificity – eliminates non specific amplification and formation of primer dimers
- Sensitivity – detects low copy number targets
- ROX solution provided in a separate tube
- Wide linear range – accurate quantification across 9 orders of magnitude
- Can be used on most real time PCR instruments
- Ready to use

Delivery information: Supplied with 50 µM ROX solution and nuclease-free water.

Description

	Pk	Cat. No.
Maxima™ Probe qPCR master mix (2X), 2×1,25 ml (for 200 reactions of 25 µl), with ROX (50 µl) and 2×1,25 ml nuclease-free water	2,5 ml	FERMK0261
Maxima™ Probe qPCR master mix (2X), 10×1,25 ml (for 1000 reactions of 25 µl), with ROX (250 µl) and 10×1,25 ml nuclease-free water	12,5 ml	FERMK0262
Maxima™ Probe qPCR master mix (2X), 4×12,5 ml (for 4000 reactions of 25 µl), with ROX (1 ml) and 2×30 ml nuclease-free water	50 ml	FERMK0263

One Step Fast and Fast MGB qRT-PCR kits, qScript™

Quanta Biosciences

These kits offer a convenient and highly sensitive solution for real time reverse transcriptase PCR (qRT-PCR) of RNA templates using hybridisation probe detection chemistries, such as TaqMan® 5'-hydrolysis probes or molecular beacons on PCR instrument platforms.

For Minor Groove Binder (MGB) modified probes, qScript™ One-Step fast MGB qRT-PCR kits are recommended. These kits offer a convenient and highly sensitive solution for qRT-PCR of RNA templates using TaqMan-MGB 5'-hydrolysis probe detection exclusively on qRT-PCR instrument platforms.

The system allows cDNA synthesis and PCR amplification to be carried out in the same tube without opening between procedures. It is ideal for highly sensitive quantification of RNA viruses or low abundance RNA targets, as well as high throughput gene expression studies. It has also been optimised to deliver maximum RT-PCR efficiency, sensitivity, and specificity in reduced reaction volumes and fast cycle times.

One-step fast master mixes are provided as a 4X concentrated solution to allow addition of higher amounts of RNA template and improved detection sensitivity with low concentration samples. The unique formulation maximises the activities of both reverse transcriptase and *Taq* DNA polymerase while minimising the potential for primer-dimer and other non specific PCR artifacts. This enables unbiased co-amplification of low copy transcripts in the presence of higher copy reference genes in duplexed qRT-PCR applications.

Highly specific amplification is crucial to successful qRT-PCR, as non specific product(s) can compete for amplification of the target sequence and impair PCR efficiency. A key component of these kits is AccuStart™ *Taq* DNA polymerase with monoclonal antibodies that bind to the polymerase and keep it inactive during reaction assembly and the 50 °C reverse transcription step. A brief 30-second heat activation step at 95 °C irreversibly denatures the antibodies, releasing fully active, unmodified *Taq* DNA polymerase. Rapid recovery of fully active, unmodified *Taq* DNA polymerase is critical for efficient extension kinetics. Therefore, these kits afford greater reagent economy and laboratory throughput on conventional or rapid ramp rate qPCR systems.

Ordering information: Kits are available for all real time PCR instrument platforms including those requiring normalisation with ROX reference dye. If not using Minor Groove Binder (MGB) modified probes exclusively, qScript™ One-Step Fast qRT-PCR kits are recommended.

Description	Pk	Cat. No.
One Step Fast qRT-PCR kits without passive reference dye		
One-Step Fast qRT-PCR kit, 100 reactions	100 Assays	733-1900
One-Step Fast qRT-PCR kit, 500 reactions	500 Assays	733-1901
One Step Fast qRT-PCR kits with ROX		
One-Step Fast qRT-PCR kit with ROX, 100 reactions	100 Assays	733-1902
One-Step Fast qRT-PCR kit with ROX, 500 reactions	500 Assays	733-1903
One Step Fast qRT-PCR kits with low ROX		
One-Step Fast qRT-PCR kit with Low ROX, 100 reactions	100 Assays	733-1904
One-Step Fast qRT-PCR kit with Low ROX, 500 reactions	500 Assays	733-1905
One Step Fast MGB qRT-PCR kits without passive reference dye		
One-Step Fast MGB qRT-PCR kit, 100 reactions	100 Assays	733-1906
One-Step Fast MGB qRT-PCR kit, 500 reactions	500 Assays	733-1907
One Step Fast MGB qRT-PCR kits with ROX		
One-Step Fast MGB qRT-PCR kit with ROX, 100 reactions	100 Assays	733-1908
One-Step Fast MGB qRT-PCR kit with ROX, 500 reactions	500 Assays	733-1909
One Step Fast MGB qRT-PCR kits with low ROX		
One-Step Fast MGB qRT-PCR kit with Low ROX, 100 reactions	100 Assays	733-1910
One-Step Fast MGB qRT-PCR kit with Low ROX, 500 reactions	500 Assays	733-1911

One-Step SYBR® Green qRT-PCR, qScript™

Quanta Biosciences

qScript™ One-Step SYBR® Green qRT-PCR kits reliably deliver maximum qRT-PCR efficiency, sensitivity and specificity in with a simplified protocol. These kits offer reliable and unbiased amplification of all RNA targets regardless of abundance. The proprietary supermix maximises activities of both reverse transcriptase and AccuStart™ *Taq* DNA polymerase without compromising specificity of amplification. qScript™ One-Step SYBR® Green qRT-PCR kits are available and optimised for all real-time PCR instrument platforms including those requiring normalisation with ROX reference dye.

Kits are available with or without ROX or with fluorescein for Bio-Rad iCycler iQ® systems. All kits contain qScript One-Step Reverse Transcriptase (optimised 50X formulation of recombinant MMLV reverse transcriptase for one-step RT-PCR); One-Step SYBR Green Master Mix (2X) reaction buffer containing dNTPs, MgCl₂, AccuStart™ *Taq* DNA polymerase, stabilisers, and SYBR® Green I dye; and nuclease-free water.

Description	Pk	Cat. No.
qScript™ One-Step SYBR® Green qRT-PCR kit without passive reference dye		
qScript™ One-Step SYBR® Green qRT-PCR kit, 50×50 µl reactions	50 Assays	QUNT95087-050
qScript™ One-Step SYBR® Green qRT-PCR kit, 200×50 µl reactions	200 Assays	QUNT95087-200
qScript™ One-Step SYBR® Green qRT-PCR kit with ROX		
qScript™ One-Step SYBR® Green qRT-PCR kit, with ROX, 50×50 µl reactions	50 Assays	QUNT95088-050
qScript™ One-Step SYBR® Green qRT-PCR kit, with ROX, 200×50 µl reactions	200 Assays	QUNT95088-200
qScript™ One-Step SYBR® Green qRT-PCR kit with low ROX		
qScript™ One-Step SYBR® Green qRT-PCR kit, with low ROX, 50×50 µl reactions	50 Assays	QUNT95089-050
qScript™ One-Step SYBR® Green qRT-PCR kit, with low ROX, 200×50 µl reactions	200 Assays	QUNT95089-200
qScript™ One-Step SYBR® Green qRT-PCR kit with fluorescein		
qScript™ One-Step SYBR® Green qRT-PCR kit, with fluorescein, 50×50 µl reactions	50 Assays	QUNT95086-050
qScript™ One-Step SYBR® Green qRT-PCR kit, with fluorescein, 200×50 µl reactions	200 Assays	QUNT95086-200

Reference gene assays, PerfeCTa®**Quanta Biosciences**

PerfeCTa® reference gene assays are concentration normalised and stabilised in a ready to use aqueous buffer.

- Validated for PCR efficiency
- Reduce or eliminate gDNA amplification
- Single SYBR® Green melting peak

Description	Pk	Cat. No.
ACTB PerfeCTa® reference gene assay, Human ACTB (β-actin), 500×20 ul reactions	500 Assays	QUNT95121-250
B2M PerfeCTa® reference gene assay, Human B2M (β-2-microglobulin), 500×20 ul reactions	500 Assays	QUNT95122-250
GAPDH PerfeCTa® reference gene assay, Human GAPDH (glyceraldehyde 3-phosphate), 500×20 ul reactions	500 Assays	733-2119
GUSB PerfeCTa® reference gene assay, Human GUSB (β-glucuronidase), 500×20 ul reactions	500 Assays	QUNT95124-250
HPRT1 PerfeCTa® reference gene assay, Human HPRT1 (hypoxanthine-guanine phosphoribosyltransferase), 500×20 ul reactions	500 Assays	QUNT95125-250
PPIA PerfeCTa® reference gene assay, Human PPIA (peptidylprolyl isomerase A [cyclophilin A]), 500×20 ul reactions	500 Assays	733-2122
RPL13A PerfeCTa® reference gene assay, Human RPL13A (60S ribosomal protein L13a), 500×20 ul reactions	500 Assays	QUNT95130-250
TFRC PerfeCTa® reference gene assay, Human TFRC (transferin receptor), 500×20 ul reactions	500 Assays	QUNT95127-250
UBC PerfeCTa® reference gene assay, Human UBC (ubiquitin C), 500×20 ul reactions	500 Assays	QUNT95128-250
YWHAZ PerfeCTa® reference gene assay, Human YWHAZ (tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide), 500×20 ul reactions	500 Assays	733-2125

**PIPETTE CALIBRATION
AT VWR INTERNATIONAL**

VWR **PIPET SERVICES™**



All brands and all models
calibrated by certified technicians.

AccuMelt™ HRM SuperMix

Quanta Biosciences

AccuMelt™ HRM SuperMix is a 2X concentrated, ready to use reaction cocktail for detection of genetic variations using high resolution melting (HRM) analysis. It includes all required components except for primers and DNA template. HRM is a closed tube, rapid and cost effective procedure for characterisation of sequences differences immediately following PCR amplification. It is based on the melting (dissociation) behavior of a PCR product as it transitions from double stranded to single stranded DNA in the presence of a fluorescent dsDNA binding dye. Each kit contains 2X reaction buffer containing optimised concentrations of MgCl₂, dNTPs (including dUTP), AccuStart™ Taq DNA polymerase, SYTO® 9 green fluorescent dye, stabilisers and free Mg²⁺ (0,8 mM at 1X final concentration).

Description	Pk	Cat. No.
AccuMelt™ HRM SuperMix (2×1,25 ml), sufficient for 250×20 µl reactions	2,5 ml	QUNT95103-250
AccuMelt™ HRM SuperMix (10×1,25 ml), sufficient for 1250×20 µl reactions	12,5 ml	QUNT95103-012
AccuMelt™ HRM SuperMix (2×25 ml), sufficient for 5000×20 µl reactions	50 ml	QUNT95103-05K

E-BUSINESS

More than just a webshop for all of your laboratory needs

Please visit us at: <http://eu.vwr.com/e-business>



Real Time PCR

Hydrolysis Probe Genotyping

AccuStart™ Genotyping Toughmix®

Quanta Biosciences

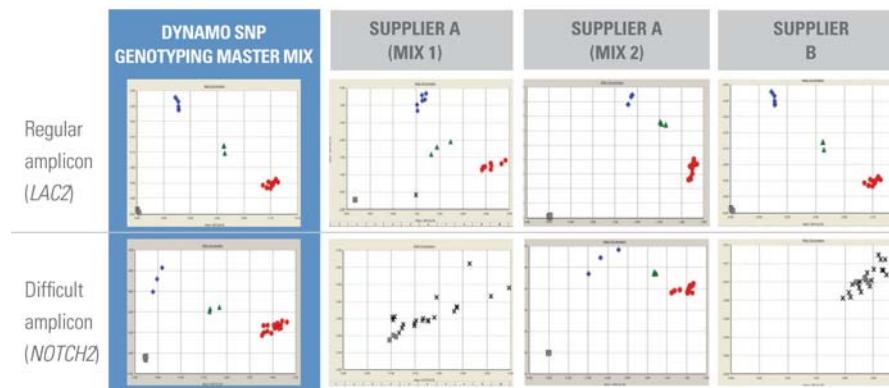
AccuStart™ Genotyping ToughMix® is a 2X concentrated ready to use reaction cocktail for PCR amplification of DNA templates that overcomes inhibitors often present in crude samples extracted from environmental specimens, plant tissues, or animal tissues. It is a versatile and robust PCR reagent that provides highly specific and efficient amplification for genotyping sequence variants including allelic discrimination of single nucleotide polymorphisms (SNPs) using a variety of fluorogenic probe chemistries, including TaqMan® hydrolysis probes. AccuStart™ Genotyping ToughMix® contains all required reaction components, except primers, probes, and DNA template. The light blue colour of the AccuVue™ tracer dye simplifies reaction assembly in white, or clear, plates and helps to minimise pipetting or mixing errors. It does not interfere with reporter dye fluorescence or affect the stability of the product. AccuStart™ Genotyping ToughMix® is compatible with both fast and conventional PCR cycling protocols.

Kits are available with or without ROX reference dye. All kits comprise of 2X reaction buffer containing optimised concentrations of MgCl₂, dNTPs (dATP, dCTP, dGTP, dTTP), Hot Start DNA polymerase, AccuVue™ blue qPCR dye, and stabilisers.

Description	Pk	Cat. No.
AccuStart™ Genotyping Toughmix® without ROX		
AccuStart™ qPCR ToughMix®, 250×20 µl reactions (2×1,25 ml)	250 Assays	733-2101
AccuStart™ qPCR ToughMix®, 1250×20 µl reactions (10×1,25 ml)	1.250 Assays	733-2099
AccuStart™ qPCR ToughMix®, 5000×20 µl reactions (1×50 ml)	5.000 Assays	733-2100
AccuStart™ Genotyping Toughmix® with ROX		
AccuStart™ qPCR ToughMix®, ROX, 250×20 µl reactions (2×1,25 ml)	250 Assays	733-2104
AccuStart™ qPCR ToughMix®, ROX, 1250×20 µl reactions (10×1,25 ml)	1.250 Assays	733-2102
AccuStart™ qPCR ToughMix®, ROX, 5000×20 µl reactions (1×50 ml)	5.000 Assays	733-2103
AccuStart™ Genotyping Toughmix® with low ROX		
AccuStart™ qPCR ToughMix®, low ROX, 250×20 µl reactions (2×1,25 ml)	250 Assays	733-2107
AccuStart™ qPCR ToughMix®, low ROX, 1250×20 µl reactions (10×1,25 ml)	1.250 Assays	733-2105
AccuStart™ qPCR ToughMix®, low ROX, 5000×20 µl reactions (1×50 ml)	5.000 Assays	733-2106

SNP genotyping master mix, DyNAmo™, Finnzymes

Thermo Scientific



DyNAmo™ SNP genotyping master mix delivers fast, high quality SNP genotyping to customers using end point fluorescence detection on real time PCR instruments. Reliable and reproducible detection of SNP alleles is achieved via a master mix formulation that offers enhanced discrimination, even when targeting the most challenging amplicons. DyNAmo™ SNP genotyping master mix has been optimised to offer superior performance when using TaqMan® SNP genotyping assays or custom designed assays.

- Fast protocol times (as low as 50 minutes)
- Achieve accurate genotyping results with as little as 0,5 ng DNA
- Two colour system aids sample set-up procedures
- Consistent performance for high throughput laboratories with pre-pipetted reactions stable for 3 days at 4 °C
- Validated for use on industry leading instruments

Delivery information: Each kit contains 2X DyNAmo™ SNP genotyping master mix (containing a Hot Start *Tbr* DNA polymerase, optimised PCR buffer, MgCl₂, dNTP mix including dUTP), 40X sample buffer with yellow dye, and 50X ROX passive reference dye.

Description	Pk	Cat. No.
DyNAmo™ SNP Genotyping master mix, 1000×25 µl reactions	1 KIT	FINRF-480L
DyNAmo™ SNP Genotyping master mix, 200×25 µl reactions	1 KIT	FINRF-480S
DyNAmo™ SNP Genotyping master mix, 4000×25 µl reactions	1 KIT	FINRF-480XL



microRNA cDNA synthesis kit, qScript™

Quanta Biosciences

The qScript™ microRNA cDNA synthesis kit has been designed to convert miRNAs into cDNA starting from total RNA or RNA preparations pre-enriched for miRNAs. miRNAs are not polyadenylated in nature. With the qScript™ microRNA cDNA synthesis kit miRNAs are polyadenylated in a poly(A) polymerase reaction. qScript™ reverse transcriptase and other necessary reagents for cDNA synthesis are subsequently added to convert the poly(A) tailed microRNAs into cDNA using an oligo-dT adapter primer. The adapter primer has a unique sequence at its 5' end which allows amplification of cDNAs in real time qRT-PCR reactions.

The kit comes complete with a Human Positive Control Primer that can be used to quantitate the small nucleolar RNA SNORD44 which is ubiquitously expressed in most human tissues. In addition, the kit contains 20% extra poly(A) tailing buffer and microRNA cDNA reaction mix to accommodate the use of no poly(A) polymerase and no reverse transcriptase control reactions.

Delivery information: Each kit contains poly(A) tailing buffer (5X), poly(A) polymerase, microRNA cDNA reaction mix, qScript™ reverse transcriptase, PerfeCTa™ universal PCR primer, PerfeCTa™ human positive control primer and nuclease-free water.

Description	Pk	Cat. No.
qScript™ microRNA cDNA synthesis kit, 25×20 µl reactions	25 Assays	733-2013
qScript™ microRNA cDNA synthesis kit, 100×20 µl reactions	100 Assays	733-2014

PerfeCTa® universal PCR primer

Quanta Biosciences

The PerfeCTa® universal PCR primer has been designed and validated to work specifically with PerfeCTa® MicroRNA assays and PerfeCTa® SYBR® Green SuperMix using microRNA cDNA produced using the qScript™ MicroRNA cDNA synthesis kit as template.

Description	Pk	Cat. No.
PerfeCTa® Universal PCR primer, 1000×25 µl reactions	500 Assays	QUNT95109-500

A selection of human, mouse and rat control RNA's and microRNA assays can be found by visiting www.quantabio.com

THE CHEMICAL BRAND
FROM VWR INTERNATIONAL

VWR  **PROLABO** 

Order your free copy online at <http://eu.vwr.com/chemical>



Real Time PCR system, PikoReal®

Thermo Scientific



The PikoReal® Real Time PCR system is light, quiet and has a small footprint, making it ideal for personal use. The PikoReal® system is available as a 24-well or 96-well instrument that fits PCR plates one quarter the size of a standard plate, while maintaining industry standards for well volume and well spacing. Due to its small size, low energy consumption and durable design, PikoReal® system is also suitable for field applications.



- Superior thermal performance - block design combined with precise temperature control ensures that quantification results are reliable and reproducible
- Five optical channels facilitate multiplexing of dyes
- Stand-alone or PC control which allows remote monitoring of any qPCR experiment

Thermal block	
Block formats	24-well, 96-well (not interchangeable)
Sample volume	10 - 50 µl (PikoReal® 24); 5 - 20 µl (PikoReal® 96)
Consumables	24-well Piko® PCR plates (1/4 of a standard SBS 96-well plate), low profile strip tubes and PCR tubes; 96-well Piko® PCR plates (1/4 of a standard SBS 384-well plate)
Max. heating rate	>5 °C/sec
Max. cooling rate	4,5 °C/sec
Temperature range	+4...99,9 °C
Temperature accuracy	±0,2 °C
Temperature uniformity	±0,3 °C at 95 °C; ±0,15 °C at 60 °C; ±0,2 °C at 72 °C
Heated lid	
Temperature range	30...100 °C
Control	Automatic temperature and pressure setting
Optics	
Excitation	5 LEDs
Excitation range	475 - 640 nm
Detection	CCD
Detection range	520 - 740 nm
Detection channels	5
Multiplex	Up to 4 targets
Dynamic range	11 orders of magnitude
Sensitivity	1 copy
Scan time for 4 multiplexing channels	<10 seconds
Software	
Analysis modes	Absolute quantification, relative quantification, melt curve analysis, allelic discrimination
System	
Operating systems	Windows XP, Windows 7
Communication	Ethernet (up to 10 instruments from a single PC) or USB
Power usage	Max. 200 W
WxDxH	300x230x310 mm
Weight	10 kg

Description	Pk	Cat. No.
PikoReal® 24 Real Time PCR system	1	731-0343
PikoReal® 96 Real Time PCR system	1	731-0344

Accessories	Pk	Cat. No.
Piko® plate illuminator	1	731-0358

Pipetting aid for Piko® PCR plates, Piko® plate illuminator

Thermo Scientific

Piko® plate illuminator provides a simple way to track the loading of reactants by illuminating the target well(s) from below with white LED lights.

- Compatible with all standard single channel, 8-channel and 16-channel pipettes
- Compact and easy to use with 10 different pre-programmed loading patterns
- 2 in 1 design accepts both 24-well and 96-well Piko® PCR plates

WxDxH: 160×90×30 mm

Weight: 0,1 kg

Description	Pk	Cat. No.
Piko® plate illuminator	1	731-0358

INSTRUMENT SERVICE AND MAINTENANCE

Please contact your local VWR sales office for more information



ALL YOU NEED GUIDES

BioBanking

Dairies

Cell culture

Environmental

Genomics

Histology and cytology

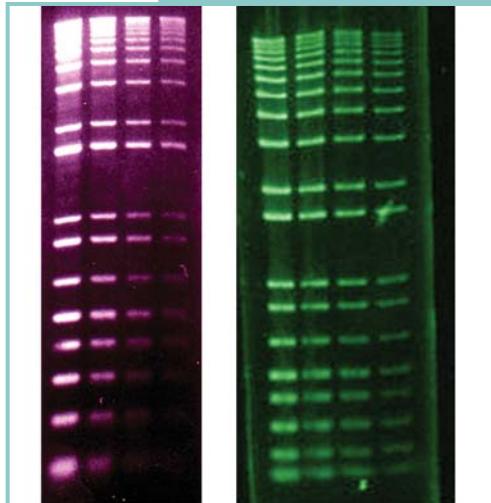
Liquid handling

Microscopy

Handy reference tools for your application or technique

Request your copy from your local VWR sales office





Reagents & Buffers	98
Markers & Dyes	101
Gel Tanks	105
Power Supplies	113

Electrophoresis

Electrophoresis

Reagents & Buffers

Agarose I™



Agarose I™ is a standard melting/gelling agarose, suitable for routine nucleic acid analytical/preparative applications. Agarose I™ has a low EEO for shorter electrophoretic runs without compromising resolution. Agarose I™ is excellent for blotting techniques and general manipulations.

- All-purpose, high purity agarose
- Exceptional band resolution and clarity
- Nuclease and protease-free
- Convenient tablet form available - no weighing required

Description	Pk	Cat. No.
Agarose I™	100 g	0710-100G
Agarose I™	250 g	0710-250G
Agarose I™	500 g	0710-500G
Agarose I™ tablets, 500 mg	100 Tab.	K857-100TABS
Agarose I™ tablets, 500 mg	1.000 Tab.	K857-1000TABS

Agarose 3:1 HRB™



Agarose 3:1 HRB™ (High Resolution Blend) is a mixture of agarose formulated to provide high resolution of small nucleic acids and PCR products. This product is specially designed for analysis of DNA fragments less than 1000 bp. Agarose 3:1 HRB™ displays precise banding patterns without smearing or high background fluorescence. The high gel strength allows for easy to handle gels that are optimal for blotting applications.

- High resolution blend
- Optimal for small nucleic acid fragments and PCR products
- Easy to handle due to high gel strength
- Nuclease and protease-free

Description	Pk	Cat. No.
Agarose 3:1 HRB™	100 g	E776-100G
Agarose 3:1 HRB™	250 g	E776-250G
Agarose 3:1 HRB™	25 g	E776-25G

Agarose SFR™



Agarose SFR™ (Super Fine Resolution) is a high resolution sieving agarose with excellent clarity. DNA bands differing in size by 2% can be resolved in the range of 200 to 1000 bp. This agarose is suitable for the analysis of AFLPs (Amplified Fragment Length Polymorphisms), STRs (Short Tandem Repeats) and tetranucleotide repeats. The low melting temperature of Agarose SFR™ makes it an excellent medium for analytical and preparative electrophoresis.

- Super fine resolution - resolve 238 bp and 242 bp bands
- Low melting point
- Nuclease and protease-free

Description	Pk	Cat. No.
Agarose SFR™	25 g	J234-25G
Agarose SFR™	100 g	J234-100G
Agarose SFR™	250 g	J234-250G

Agarose LF™



Agarose LF™ (Large Fragment) is optimised for pulsed-field gel electrophoresis (PFGE) applications. The exceptionally low EEO and high gel strength of Agarose LF™ facilitates faster electrophoresis running times in low concentration gels. This agarose is best suited for resolving large (>20 kb) DNA fragments.

- Optimised for pulsed field gel electrophoresis (PFGE)
- Ideal for resolving large (>20 kb) DNA fragments
- Nuclease and protease-free

Description	Pk	Cat. No.
Agarose LF™	25 g	X174-25G
Agarose LF™	100 g	X174-100G
Agarose LF™	250 g	X174-250G



Nucleic acid loading dyes



- Ready to use
- Eliminates exposure to irritating and harmful powdered dyes
- DNase, RNase and protease-free
- Functionally and analytically tested

Description	Pk	Cat. No.
Agarose gel loading dye, 6X, containing 3 tracking dyes and 15% Ficoll	5 ml	E190-5ML
Glycerol gel loading dye, 5X, containing 3 tracking dyes and 30% glycerol	1 ml	E269-1ML
Glycerol gel loading dye, 5X, containing 3 tracking dyes and 30% glycerol	5 ml	E269-5ML
Gel loading buffer (BPB), 4X, containing bromophenol blue	5 ml	K945-5ML
Sequencing gel loading dye, 3X, for denaturing DNA samples, containing 3 tracking dyes and formamide	1 ml	E268-1ML
Sequencing gel loading dye, 3X, for denaturing DNA samples, containing 3 tracking dyes and formamide	5 ml	E268-5ML
Sucrose gel loading dye, 5X, containing 3 tracking dyes and 40% sucrose	1 ml	E274-1ML
Sucrose gel loading dye, 5X, containing 3 tracking dyes and 40% sucrose	5 ml	E274-5ML

Tris-Acetate-EDTA (TAE) buffer



- Ideal for DNA recovery and in-gel manipulations
- Low ionic strength
- Better resolution of large DNA fragments (>12 kb DNA)
- Convenient packaging options minimise weighing and mixing

Composition of (1X) TAE Buffer: 0,04 M Tris-Acetate; 0,001 M EDTA; final pH 8,0

Description	Pk	Cat. No.
TAE buffer, 25X liquid concentrate	1,6 l	0796-1.6L
TAE buffer, 25X Ready-Pack™, each pack makes 1 litre of 25X TAE buffer	2	0912-2PK
TAE buffer, 25X liquid concentrate	4 l	0796-4L
TAE buffer, 25X liquid concentrate	5 l	0796-5L
TAE buffer, 50X liquid concentrate	1,6 l	K915-1.6L
TAE buffer, 50X liquid concentrate	4 l	K915-4L
TAE buffer, 50X liquid concentrate	5 l	K915-5L
TAE buffer, 50X liquid concentrate	20 l	K915-20L

Tris-Borate-EDTA (TBE) buffers



TBE is optimised for DNA electrophoresis techniques using both acrylamide and agarose. Buffers are available as liquid concentrate or Ready-Pack™ (a foil pouch containing sufficient material to prepare 1 L of 10X concentrate).

- High buffering capacity
- High ionic strength
- Permits extended electrophoresis runs without buffer recirculation
- Convenient packaging options minimise weighing and mixing

Description	Pk	Cat. No.
TBE buffer, 5X liquid concentrate	1 l	J885-1L
TBE buffer, 5X liquid concentrate	4 l	J885-4L
TBE buffer, 5X liquid concentrate	5 l	J885-5L
TBE buffer, 5X liquid concentrate	20 l	J885-20L
TBE buffer, 10X Ready-Pack™, each pack makes 1 litre of 10X TBE buffer	2	0478-2PK
TBE buffer, 10X liquid concentrate	1 l	0658-1L
TBE buffer, 10X liquid concentrate	4 l	0658-4L
TBE buffer, 10X liquid concentrate	5 l	0658-5L
TBE buffer, 10X liquid concentrate	20 l	0658-20L

MOPS buffer



- Optimised for RNA agarose electrophoresis
- Ideal for use with RNA formaldehyde gels

Description	Pk	Cat. No.
MOPS, 10X liquid concentrate, nuclease-free, makes 5 litres of 1X solution	500 ml	E526-500ML
MOPS, 10X Ready-Pack™, for 1 litre of 10X solution	1	K946-1PK
MOPS, powder	100 g	0670-100G
MOPS, powder	250 g	0670-250G
MOPS, powder	500 g	0670-500G
MOPS sodium salt, powder	25 g	E413-25G
MOPS sodium salt, powder	100 g	E413-100G
MOPS sodium salt, powder	250 g	E413-250G

Acrylamide/bis-acrylamide



Description	Pk	Cat. No.
Acryl-40™ solution, 20% w/v	500 ml	0132-500ML
Bis-acrylamide, ultrapure powder	50 g	0172-50G
Bis-acrylamide, ultrapure powder	100 g	0172-100G
Bis-acrylamide, ultrapure powder	250 g	0172-250G
Acryl/Bis™ 19:1, pre-mixed powder	40 g	0729-40G
Acryl/Bis™ 19:1, pre-mixed powder	200 g	0729-200G
Acryl/Bis™ 19:1 solution, 40% w/v solution	500 ml	0496-500ML
Acryl/Bis™ 19:1 solution, 40% w/v solution	1 l	0496-1L
Acryl/Bis™ 29:1, pre-mixed powder	40 g	0673-40G
Acryl/Bis™ 29:1, pre-mixed powder	200 g	0673-200G
Acryl/Bis™ 29:1 solution, 40% w/v solution	500 ml	0311-500ML
Acryl/Bis™ 29:1 solution, 40% w/v solution	1 l	0311-1L
Acryl/Bis™ 37.5:1 solution, 40% solution containing 38.96% (w/v) acrylamide and 1.04% (w/v) bis-acrylamide	500 ml	0254-500ML
Acrylamide, ultrapure powder	100 g	0341-100G
Acrylamide, ultrapure powder	500 g	0341-500G
Acrylamide, ultrapure powder	1 kg	0341-1KG
Bis-2™ solution, 2% w/v	500 ml	0832-500ML

Denhardt's solution



A blocking reagent used to help prevent the probe from binding to open membrane space and non target nucleic acids.

Description	Pk	Cat. No.
Denhardt's solution, 100X, biotechnology grade	10 ml	E257-10ML
Denhardt's solution, 100X, biotechnology grade	50 ml	E257-50ML

VWR COLLECTION

Delivering High Quality & Superior Performance

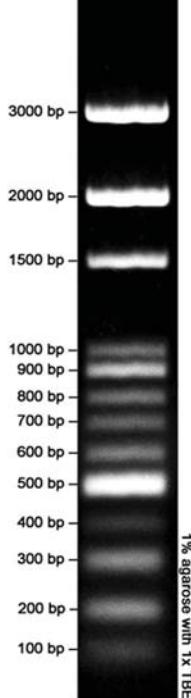
Please contact your local VWR sales office or
go to www.vwr.com for the latest news and special offers



DNA ladder, 100 bp



Ladder with 13 fragments ranging from 100 to 3000 bp for easy band identification.

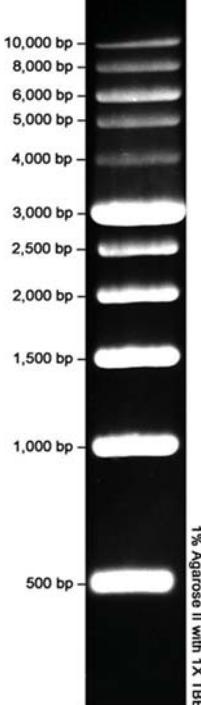


Description	Pk	Cat. No.
100 bp ladder, sufficient for 50 lanes	250 μ l	K180-250UL
100 bp Ready Ladder™, pre-mixed with loading dye, sufficient for 50 lanes	300 μ l	N550-300UL

DNA ladder, 1 kb



Ladder with 11 fragments ranging from 500 to 10 000 bp for easy band identification.

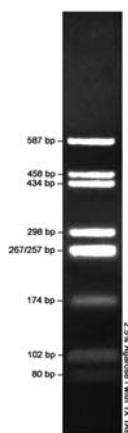


Description	Pk	Cat. No.
1 kb ladder, sufficient for 100 lanes	500 μ l	K181-500UL
1 kb Ready Ladder™, pre-mixed with loading dye, sufficient for 100 lanes	600 μ l	N551-600UL
EZ-Vision® 1 kb DNA ladder, sufficient for 100 lanes	600 μ l	N854-600UL

Electrophoresis

Markers & Dyes

DNA MicroMarker™

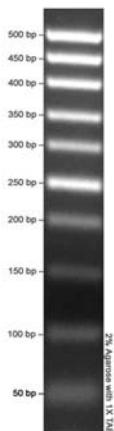


DNA MicroMarker™ with 9 fragments ranging from 80 to 587 bp for easy band identification.

- Ideal for electrophoresis of PCR fragments
- Accurate size estimation of small DNA fragments

Description	Pk	Cat. No.
DNA MicroMarker™, sufficient for 50 lanes	100 µG	E840-100UG

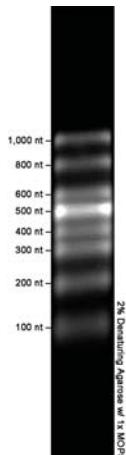
DNA ladder, 50 bp, Ready Ladder™



Ladder with 10 fragments ranging from 50 to 500 bp for easy band identification. Ready to use formula pre-mixed with loading dye.

Description	Pk	Cat. No.
50 bp Ready Ladder™, pre-mixed with loading dye, sufficient for 100 lanes	1 KIT	N746-100RXN

RNA ladder, 100 bp, RiboReady™

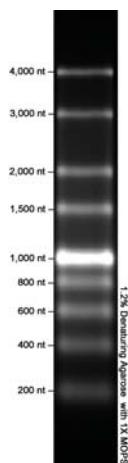


RiboReady™ ladders contain tracking dyes for loading and monitoring of your sample during electrophoresis as well as ethidium bromide for immediate visualisation of the ladder after electrophoresis. Fragment range 100 to 1000 nt.

Description	Pk	Cat. No.
RiboReady™ 100 bp RNA ladder, sufficient for 25 lanes	1 KIT	N603-KIT



RNA ladder, 1 kb, RiboReady™



RiboReady™ ladders contain tracking dyes for loading and monitoring of your sample during electrophoresis as well as ethidium bromide for immediate visualisation of the ladder after electrophoresis. Fragment range 200 to 4000 nt.

Description	Pk	Cat. No.
RiboReady™ 1 kb RNA ladder, sufficient for 25 lanes	1 KIT	N604-KIT

Ethidium bromide



- Fluorescent stain for visualising nucleic acids
- Easy to use dropper bottle option

Description	Pk	Cat. No.
Ethidium bromide, dropper bottle, 0,625 mg/ml	15 ml	E406-15ML
Ethidium bromide, dropper bottle, 0,625 mg/ml	5 ml	E406-5ML
Ethidium bromide, stock solution, 10 mg/ml	10 ml	X328-10ML

DNA dye as loading buffer, EZ-Vision®



EZ-Vision® DNA dye as loading buffer provides a non mutagenic, environmentally friendly alternative to ethidium bromide for instantaneous fluorescent DNA band visualisation.

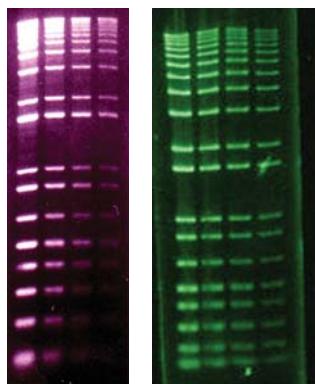
- Low background
- Requires no post-electrophoresis staining or destaining
- Works with most existing filters for gel documentation
- Broad emission spectra with peak near 450 nm
- Completely eliminates the need for ethidium bromide

Delivery information: Supplied as a kit containing 1, 2 or 3 tracking dyes in 6X loading buffer.

Description	Pk	Cat. No.
EZ-Vision® 1 DNA dye kit, with dye migrating at ~10 bp in a 1% agarose gel	1 KIT	N472-KIT
EZ-Vision® 1 DNA tracking dye at 10 bp only	0,5 ml	N472-Q-0.5ML
EZ-Vision® 2 DNA dye kit, with dyes migrating at ~4000 bp and 400 bp in a 1% agarose gel	1 KIT	N650-KIT
EZ-Vision® 3 DNA dye kit, with dyes migrating at ~4000 bp, 400 bp and 10 bp in a 1% agarose gel	1 KIT	N313-KIT

Nucleic acid gel stains, GelRed™ and GelGreen™

Biotium



GelRed™ and GelGreen™ are fluorescent nucleic acid gel stains that combine high sensitivity, low toxicity and exceptional stability. GelRed™ is compatible with any standard 312 nm transilluminator; GelGreen™ can be used with a 254 nm UV transilluminator or gel reader with visible light excitation.

- Highly sensitive either as precast gel stains or post gel stains
- Can be microwaved and stored at room temperature
- GelRed™ has been shown to be less mutagenic than ethidium bromide and is available at 10 000X concentration in water for increased safety
- No destaining necessary

Description	Pk	Cat. No.
GelRed™ 3X in water	4 l	730-2956
GelRed™ 10 000X in DMSO	0,5 ml	730-2957
GelRed™ 10 000X in water	0,5 ml	730-2958
GelRed™ 10 000X in water	10 ml	730-2960
GelGreen™ 10 000X in DMSO	0,5 ml	730-2959
GelGreen™ 10 000X in water	0,5 ml	730-2961
GelGreen™ 10 000X in water	10 ml	730-1343

VWR.COM
TALKING YOUR LANGUAGE



The local website with global reach

Mini Gel II electrophoresis system



The Mini Gel II is a complete electrophoresis system, which includes all components necessary to cast and run horizontal gels - gel trays, combs, casting stand, gel tank and digital power supply.

- Migration tank and gel trays are moulded for leakproof performance and for a long service life, and the lid of the gel box is vented to dissipate heat during electrophoresis
- Power supply easily disconnects from the gel box so that the gel box can be cleaned
- Mode and arrow keys on the membrane key pad make programming easy, with all parameters shown on a large digital display
- Casting sets are designed for pouring gels without the use of tape or spacers and casting trays feature multiple slots for holding combs in place
- Electrodes are contained in cassettes to protect from damage

Buffer tank volume (ml)	250
Capacity	1 large gel (12.5×13 cm), 2 small gels (12.5×6 cm) or 4 micro gels (6×6 cm)
Input voltage (V)	Universal, AC 100 - 240 V, 50/60 Hz
Max. power (W)	45
Memory	Last parameters saved in memory
Output current range/increments (mA)	10 - 400/1
Output voltage (V)	10 - 150
Safety	Microsensor (Hall effect) in power supply, no output without safety lid in place, automatic crossover, no load and load change detection
Sample capacity	112 samples (4 combs)
Tank W×D×H (mm)	183×164×560
Timer	Maximum 99 hours, 59 minutes or continuous, audible alert at end of run
Unit W×L×H (mm)	245×170×620

Delivery information: Supplied with gel tank, direct connection power supply, and standard gel casting set. Standard casting set includes 12.5×13 cm gel tray, 2 each 12.5×6 cm gel trays, 4 each 14/28 tooth combs (1 mm) and a casting stand. Optional Micro casting set includes 4 each 6×6 cm UV transparent gel trays, 2 each 5/8 tooth combs (1 mm) and a casting stand.

Description	Pk	Cat. No.
VWR Mini Gel II Complete Electrophoresis System, EU plug	1	700-0003
VWR Mini Gel II complete electrophoresis system, UK plug	1	700-0004
VWR Mini Gel II Complete Electrophoresis System, CH plug	1	700-0005

Combs	Pk	Cat. No.
Description		
Gel comb, 14/28 teeth (1 mm), reversible, set of 2	2	700-0009
Gel comb, 5/8 teeth (1 mm), reversible, set of 2	2	700-0010

Accessories	Pk	Cat. No.
Description		
Large UV transparent gel trays, 12.5×13 cm, set of 2	2	700-0006
Small UV transparent gel trays, 12.5×6 cm, set of 2	2	700-0007
Micro UV transparent gel trays, 6×6 cm, set of 4	4	700-0008
Micro casting set	1	700-0011
Casting stand	1	700-0012
Standard casting set	1	700-0013

Horizontal electrophoresis systems, kuroGEL



The kuroGEL range of horizontal electrophoresis units are ideal for screening and analysis of a wide range of samples, including PCR products, DNA mini-preps, plasmid vectors and restriction fragments. The compact size of the Mini and Mini Plus models optimises gel conditions allowing fast resolution of nucleic acids. Midi units accommodate standard gels for medium throughput analysis and the preparation of nucleic acids. Maxi and Maxi Plus units are available in standard and cooled formats and are designed for the rapid, medium-to-high throughput screening of nucleic acids, such as HLA typing in population genetics studies. All models are supplied complete with tank, casting tray, 1 mm thick combs and coloured loading strips.

- Robust acrylic tank construction with 12 mm thick walls
- Safety lid with integral power leads compatible with low to medium voltage power supplies
- Durable, high impact polystyrene combs
- Colour coded combs corresponding to 1.0, 1.5 and 2.0 mm thicknesses

Electrophoresis

Gel Tanks



kuroGEL Mini 6 Horizontal

The kuroGEL Mini 6 Horizontal is ideal for routine preparatory and analytical electrophoresis techniques.

- Short 6 cm gel length for rapid separations
- Coloured loading strips for easy well detection when loading
- Compact tank reduces the buffer volume required to cover the gel, providing greater control over the voltage gradient and run time
- UV transparent acrylic casting tray allows the user to handle the gel on the transilluminator with minimum risk of exposure to hazardous ethidium bromide
- Side handles allow safe and easy transportation around the laboratory

Buffer volume (ml)	325
Gel size W×L (mm)	60×75
Sample capacity	32
Unit W×L×H (mm)	130×240×65
Recommended running voltage (V)	70 - 90
Power output shrouded, connectors (Ø mm)	4

Delivery information: Gel tank supplied with removable casting tray; 2×1.0 mm thick, eight-sample combs; and coloured loading strips.

Description	Pk	Cat. No.
Horizontal gel unit, kuroGEL Mini 6, 6×7.5 cm	1	700-0015

Combs for kuroGEL Mini 6

Combs are colour coded and height adjustable, offering complete control over loading volume and well depth to a maximum 32-sample throughput.

Comb slots: 2; comb thickness: 1.0, 1.5 or 2.0 mm; comb throughput: 4 to 16 samples.

Description	Pk	Cat. No.
Comb, 8 sample wells, 1,0 mm, for kuroGEL Mini 6	1	700-0025
Comb, 12 sample wells, 1,0 mm, for kuroGEL Mini 6*	1	700-0026
Comb, 16 sample wells, 1,0 mm, for kuroGEL Mini 6	1	700-0027
Comb, 8 sample wells, 1,5 mm, for kuroGEL Mini 6	1	700-0028
Comb, 12 sample wells, 1,5 mm, for kuroGEL Mini 6*	1	700-0029
Comb, 16 sample wells, 1,5 mm, for kuroGEL Mini 6	1	700-0030
Comb, 8 sample wells, 2,0 mm, for kuroGEL Mini 6	1	700-0031
Comb, 12 sample wells, 2,0 mm, for kuroGEL Mini 6*	1	700-0032
Comb, 16 sample wells, 2,0 mm, for kuroGEL Mini 6	1	700-0033

*multichannel pipette compatible

Accessories for kuroGEL Mini 6

In-tank casting options: Silicone gaskets lining the casting tray form a leakproof seal against the inner walls of the running chamber when the casting tray is turned at 90° to the direction of electrophoresis; 6 cm long Super-Seals offer total versatility in casting, allowing the gel length to be tailored to the personal requirements of the user.

External casting options: Silicone casting gates slot into the grooves at each end of the casting tray to form a leak-free seal; Silicone gaskets seated in the groove of each casting tray form a leak-free seal against the walls of the casting unit, allowing three gels to be cast simultaneously.

Coloured loading strips (optional) aid visualisation during gel loading. Available in three different colours for easy visualisation of samples mixed with dyes such as bromophenol and xylene cyanol. Each colour strip has an adhesive backing allowing it to be easily affixed and removed with each application.

Gel scoops (optional) are ideal for safe and easy transfer of gels from staining or destaining tanks to a transilluminator or similar surface.

Description	Pk	Cat. No.
Gel casting tray for kuroGEL Mini 6, 6×7.5 cm	1	700-0016
Casting gate, silicone, for kuroGEL Mini 6 casting tray	2	700-0017
Gasket, silicone for all kuroGEL units, 1 m, cut to fit	1	700-0018
Casting gate Super-Seals for kuroGEL Mini 6 casting tray	2	700-0019
Coloured loading strips for kuroGEL Mini 6	12	700-0020
Casting base, external, for 3-gel casting trays for kuroGEL Mini 6	1	700-0021
Gel scoop for 6 cm wide gel transfer	1	700-0022
Electrode replacement part, 50 cm, for all kuroGEL units	2	700-0023
Power leads, 2×1 m, with 4 mm connectors	1 SET	700-0024



kuroGEL Mini Plus 10 Horizontal

The kuroGEL Mini Plus 10 Horizontal is ideal for routine preparatory and analytical electrophoresis techniques.

- Coloured loading strips for easy well detection when loading
- Compact tank reduces the buffer volume required to cover the gel, providing greater control over the voltage gradient and run time
- UV transparent acrylic casting tray allows the user to handle the gel on the transilluminator with minimum risk of exposure to hazardous ethidium bromide
- Side handles allow safe and easy transportation around the laboratory

Buffer volume (ml)	450
Gel size W×L (mm)	100×115
Sample capacity	80
Unit W×L×H (mm)	165×230×65
Recommended running voltage (V)	75 - 125
Power output shrouded, connectors (Ø mm)	4

Delivery information: Gel tank supplied with removable casting tray; 2×1.0 mm thick, 16-sample combs; and coloured loading strips.

Description	Pk	Cat. No.
Horizontal gel unit, kuroGEL Mini Plus 10, 10×11,5 cm	1	700-0034

Combs for kuroGEL Mini Plus 10

Combs are colour coded and height adjustable, offering complete control over loading volume and well depth to a maximum 80-sample throughput. Four comb positions at 2.5 cm intervals along the tray for swift separation of multiple samples.

Comb slots: 4; comb thickness: 1.0, 1.5 or 2.0 mm; comb throughput: 4 to 20 samples.

Description	Pk	Cat. No.
Comb, 8 sample wells, 1,0 mm, for kuroGEL Mini Plus 10	1	700-0041
Comb, 10 sample wells, 1,0 mm, for kuroGEL Mini Plus 10*	1	700-0042
Comb, 12 sample wells, 1,0 mm, for kuroGEL Mini Plus 10	1	700-0043
Comb, 16 sample wells, 1,0 mm, for kuroGEL Mini Plus 10	1	700-0044
Comb, 20 sample wells, 1,0 mm, for kuroGEL Mini Plus 10*	1	700-0045
Comb, 8 sample wells, 1,5 mm, for kuroGEL Mini Plus 10	1	700-0046
Comb, 10 sample wells, 1,5 mm, for kuroGEL Mini Plus 10*	1	700-0047
Comb, 12 sample wells, 1,5 mm, for kuroGEL Mini Plus 10	1	700-0048
Comb, 16 sample wells, 1,5 mm, for kuroGEL Mini Plus 10	1	700-0049
Comb, 20 sample wells, 1,5 mm, for kuroGEL Mini Plus 10*	1	700-0050
Comb, 8 sample wells, 2,0 mm, for kuroGEL Mini Plus 10	1	700-0051
Comb, 10 sample wells, 2,0 mm, for kuroGEL Mini Plus 10*	1	700-0052
Comb, 12 sample wells, 2,0 mm, for kuroGEL Mini Plus 10	1	700-0053
Comb, 16 sample wells, 2,0 mm, for kuroGEL Mini Plus 10	1	700-0054
Comb, 20 sample wells, 2,0 mm, for kuroGEL Mini Plus 10*	1	700-0055

*multichannel pipette compatible

Accessories for kuroGEL Mini Plus 10

In-tank casting options: Silicone gaskets lining the casting tray form a leakproof seal against the inner walls of the running chamber when the casting tray is turned at 90° to the direction of electrophoresis; 10 cm long Super-Seals offer total versatility in casting, allowing the gel length to be tailored to the personal requirements of the user.

External casting options: Silicone casting gates slot into the grooves at each end of the casting tray to form a leak-free seal; Silicone gaskets seated in the groove of each casting tray form a leak-free seal against the walls of the casting unit, allowing three gels to be cast simultaneously.

Coloured loading strips (optional) aid visualisation during gel loading. Available in three different colours for easy visualisation of samples mixed with dyes such as bromophenol and xylene cyanol. Each colour strip has an adhesive backing allowing it to be easily affixed and removed with each application.

Gel scoops (optional) are ideal for safe and easy transfer of gels from staining or destaining tanks to a transilluminator or similar surface.

Description	Pk	Cat. No.
Gel casting tray for kuroGEL Mini Plus 10, 10×11,5 cm	1	700-0035
Casting gate, silicone, for kuroGEL Mini Plus 10 casting tray	2	700-0036
Casting gate Super-Seals for kuroGEL Mini Plus 10 casting tray	2	700-0037
Coloured loading strips for kuroGEL Mini Plus 10	12	700-0038
Casting base, external, for 3-gel casting trays for kuroGEL Mini Plus 10	1	700-0039
Gel scoop for 10 cm wide gel transfer	1	700-0040

Electrophoresis

Gel Tanks



kuroGEL Midi 13 Horizontal

The kuroGEL Midi 13 Horizontal gel electrophoresis unit is ideal for analytical and preparative studies of nucleic acids.

- Buffer recirculation ports that can be connected to a peristaltic pump for buffer recirculation during electrophoresis to maintain buffer pH and prevent ionic gradient formation
- Coloured loading strips, for easy well detection when loading
- Compact tank, reduces the buffer volume required to cover the gel, providing greater control over the voltage gradient and run time
- UV-transparent acrylic casting tray, allowing the user to handle the gel on the transilluminator with minimum risk of exposure to hazardous ethidium bromide
- Side handles, for safe and easy transportation around the laboratory

Buffer volume (ml)	900
Gel size W×L (mm)	128×150
Sample capacity	112
Unit W×L×H (mm)	200×320×70
Recommended running voltage (V)	100 - 125
Power output shrouded, connectors (Ø mm)	4

Delivery information: Gel tank supplied with removable casting tray; 2×1.0 mm thick, 16-sample combs; coloured loading strips and buffer recirculation ports

Description	Pk	Cat. No.
Horizontal gel unit, kuroGEL Midi 13, 12, 8×15 cm	1	700-0056

Combs for kuroGEL Midi 13

Combs are colour coded and height adjustable, offering complete control over loading volume and well depth to a maximum 112-sample throughput. Four comb positions with 3.5 cm intervals along the tray for faster separation of multiple samples.

Comb slots: 4; comb thickness: 1,0, 1,5 or 2,0 mm; comb throughput: 10 to 28 samples.

Description	Pk	Cat. No.
Comb, 10 sample wells, 1,0 mm, for kuroGEL Midi 13	1	700-0064
Comb, 12 sample wells, 1,0 mm, for kuroGEL Midi 13*	1	700-0065
Comb, 16 sample wells, 1,0 mm, for kuroGEL Midi 13	1	700-0066
Comb, 20 sample wells, 1,0 mm, for kuroGEL Midi 13	1	700-0067
Comb, 24 sample wells, 1,0 mm, for kuroGEL Midi 13	1	700-0068
Comb, 28 sample wells, 1,0 mm, for kuroGEL Midi 13*	1	700-0069
Comb, 10 sample wells, 1,5 mm, for kuroGEL Midi 13	1	700-0070
Comb, 12 sample wells, 1,5 mm, for kuroGEL Midi 13*	1	700-0071
Comb, 16 sample wells, 1,5 mm, for kuroGEL Midi 13	1	700-0072
Comb, 20 sample wells, 1,5 mm, for kuroGEL Midi 13	1	700-0073
Comb, 24 sample wells, 1,5 mm, for kuroGEL Midi 13	1	700-0074
Comb, 28 sample wells, 1,5 mm, for kuroGEL Midi 13*	1	700-0075
Comb, 10 sample wells, 2,0 mm, for kuroGEL Midi 13	1	700-0076
Comb, 12 sample wells, 2,0 mm, for kuroGEL Midi 13*	1	700-0077
Comb, 16 sample wells, 2,0 mm, for kuroGEL Midi 13	1	700-0078
Comb, 20 sample wells, 2,0 mm, for kuroGEL Midi 13	1	700-0079
Comb, 24 sample wells, 2,0 mm, for kuroGEL Midi 13	1	700-0080
Comb, 28 sample wells, 2,0 mm, for kuroGEL Midi 13*	1	700-0081

*multichannel pipette compatible

Accessories for kuroGEL Midi 13

In-tank casting options: Silicone gaskets lining the casting tray form a leakproof seal against the inner walls of the running chamber when the casting tray is turned at 90° to the direction of electrophoresis; 13 cm long Super-Seals offer total versatility in casting, allowing the gel length to be tailored to the personal requirements of the user.

External casting options: Silicone casting gates slot into the grooves at each end of the casting tray to form a leak-free seal; Silicone gaskets seated in the groove of each casting tray form a leak-free seal against the walls of the casting unit, allowing three gels to be cast simultaneously.

Coloured loading strips (optional) aid visualisation during gel loading. Available in three different colours for easy visualisation of samples mixed with dyes such as bromophenol and xylene cyanol. Each colour strip has an adhesive backing allowing it to be easily affixed and removed with each application.

Gel scoops (optional) are ideal for safe and easy transfer of gels from staining or destaining tanks to a transilluminator or similar surface.

Description	Pk	Cat. No.
Gel casting tray for kuroGEL Midi 13, 12.8×15 cm	1	700-0057
Electrophoresis buffer recirculation ports for kuroGEL Midi, Midi Plus, Maxi and Maxi Plus	2	700-0058
Casting gate, silicone, for kuroGEL Midi 13 casting tray	2	700-0059
Casting gate Super-Seals for kuroGEL Midi 13 casting tray	2	700-0060
Coloured loading strips for kuroGEL Midi 13	12	700-0061
Casting base, external, for 3-gel casting trays for kuroGEL Midi 13	1	700-0062
Gel scoop for 13 cm wide gel transfer	1	700-0063



kuroGEL Midi Plus 15 Horizontal

The kuroGEL Midi Plus 15 Horizontal standard gel electrophoresis unit provides the most popular comb throughput and tray-size options, but with additional casting options.

- Multichannel pipette compatible combs, with a maximum 30-sample throughput, reduce gel loading time, while preparatory combs enable nucleic acids to be scaled-up for cloning
- Buffer recirculation ports can be connected to a peristaltic pump for buffer recirculation during electrophoresis to maintain buffer pH and prevent ionic gradient formation
- Coloured loading strips for easy well detection when loading
- UV-transparent acrylic casting tray allows the user to handle the gel on the transilluminator with minimum risk of exposure to hazardous ethidium bromide
- Side handles, for safe and easy transportation around the laboratory

Buffer volume (ml)	1200
Gel size W×L (mm)	150×150
Sample capacity	120
Unit W×L×H (mm)	215×335×70
Recommended running voltage (V)	100 - 125
Power output shrouded, connectors (Ø mm)	4

Delivery information: Gel tank supplied with removable casting tray; 2×1.0 mm thick, 16-sample combs; coloured loading strips and buffer recirculation ports

Description	Pk	Cat. No.
Horizontal gel unit, kuroGEL Midi Plus 15, 15×15 cm	1	700-0082

Combs for kuroGEL Midi Plus 15

Combs are colour coded and height adjustable, offering complete control over loading volume and well depth to a maximum 120 sample throughput. Four comb positions with 3.5 cm intervals along the tray for faster separation of multiple samples.

Comb slots: 4; comb thickness: 1.0, 1.5 or 2.0 mm; comb throughput: 1 to 30 samples.

Description	Pk	Cat. No.
Comb, 10 sample wells, 1.0 mm, for kuroGEL Midi Plus 15	1	700-0088
Comb, 15 sample wells, 1.0 mm, for kuroGEL Midi Plus 15	1	700-0089
Comb, 16 sample wells, 1.0 mm, for kuroGEL Midi Plus 15*	1	700-0090
Comb, 20 sample wells, 1.0 mm, for kuroGEL Midi Plus 15	1	700-0091
Comb, 25 sample wells, 1.0 mm, for kuroGEL Midi Plus 15	1	700-0092
Comb, 30 sample wells, 1.0 mm, for kuroGEL Midi Plus 15*	1	700-0093
Comb, 10 sample wells, 1.5 mm, for kuroGEL Midi Plus 15	1	700-0094
Comb, 15 sample wells, 1.5 mm, for kuroGEL Midi Plus 15	1	700-0095
Comb, 16 sample wells, 1.5 mm, for kuroGEL Midi Plus 15*	1	700-0096
Comb, 20 sample wells, 1.5 mm, for kuroGEL Midi Plus 15	1	700-0097
Comb, 25 sample wells, 1.5 mm, for kuroGEL Midi Plus 15	1	700-0098
Comb, 30 sample wells, 1.5 mm, for kuroGEL Midi Plus 15*	1	700-0099
Comb, 10 sample wells, 2.0 mm, for kuroGEL Midi Plus 15	1	700-0130
Comb, 15 sample wells, 2.0 mm, for kuroGEL Midi Plus 15	1	700-0131
Comb, 16 sample wells, 2.0 mm, for kuroGEL Midi Plus 15*	1	700-0132
Comb, 20 sample wells, 2.0 mm, for kuroGEL Midi Plus 15	1	700-0133
Comb, 25 sample wells, 2.0 mm, for kuroGEL Midi Plus 15	1	700-0134
Comb, 30 sample wells, 2.0 mm, for kuroGEL Midi Plus 15*	1	700-0135

*multichannel pipette compatible

Accessories for kuroGEL Midi Plus 15

Casting options: Casting gates with integral silicone seals effectively seal the tray without the need for tape, provided the silicone gasket faces outwards. 15 cm long Super-Seals offer total versatility in casting, allowing the gel length to be tailored to each user's personal requirements.

Coloured loading strips (optional) aid visualisation during gel loading. Available in three different colours for easy visualisation of samples mixed with dyes such as bromophenol and xylene cyanol. Each colour strip has an adhesive backing allowing it to be easily affixed and removed with each application.

Gel scoops (optional) are ideal for safe and easy transfer of gels from staining or destaining tanks to a transilluminator or similar surface.

Description	Pk	Cat. No.
Gel casting tray for kuroGEL Midi Plus 15, 15×15 cm	1	700-0083
Casting gate with integral silicone seals, for kuroGEL Midi Plus 15 casting tray	2	700-0084
Casting gate Super-Seals for kuroGEL Midi Plus 15 casting tray	2	700-0085
Coloured loading strips for kuroGEL Midi Plus 15	12	700-0086
Gel scoop for 15 cm wide gel transfer	1	700-0087

Electrophoresis

Gel Tanks



kuroGEL Maxi 20 Horizontal

The kuroGEL Maxi 20 Horizontal gel electrophoresis unit is ideal for high resolution analytical and preparative studies of nucleic acids. Large format, 20×20 cm, gel tray is ideal for high resolution techniques, such as screening PCR products and RFLP analysis.

- Multichannel pipette compatible combs, with a maximum 42-sample throughput reduce gel-loading time
- Buffer recirculation ports can be connected to a peristaltic pump for buffer recirculation during electrophoresis to maintain buffer pH and prevent ionic gradient formation
- Coloured loading strips for easy well detection when loading
- UV-transparent acrylic casting tray allows the user to handle the gel on the transilluminator with minimum risk of exposure to hazardous ethidium bromide
- Side handles, for safe and easy transportation around the laboratory

Buffer volume (ml)	2200
Gel size W×L (mm)	200×200
Sample capacity	168
Unit W×L×H (mm)	270×475×80
Recommended running voltage (V)	150 - 175
Power output shrouded, connectors (Ø mm)	4

Delivery information: Gel tank supplied with removable casting tray; 2×1.0 mm thick, 16-sample combs; coloured loading strips and buffer recirculation ports

Description	Pk	Cat. No.
Horizontal gel unit, kuroGEL Maxi 20, 20×20 cm	1	700-0136

Combs for kuroGEL Maxi 20

Combs are colour coded and height adjustable, offering complete control over loading volume and well depth to a maximum 168-sample throughput. Four comb positions at 5 cm intervals along the tray for faster separation of multiple samples.

Comb slots: 4; comb thickness: 1,0, 1,5 or 2,0 mm; comb throughput: 16 to 42 samples.

Description	Pk	Cat. No.
Comb, 16 sample wells, 1,0 mm, for kuroGEL Maxi 20	1	700-0142
Comb, 20 sample wells, 1,0 mm, for kuroGEL Maxi 20*	1	700-0143
Comb, 28 sample wells, 1,0 mm, for kuroGEL Maxi 20	1	700-0144
Comb, 40 sample wells, 1,0 mm, for kuroGEL Maxi 20*	1	700-0145
Comb, 16 sample wells, 1,5 mm, for kuroGEL Maxi 20	1	700-0146
Comb, 20 sample wells, 1,5 mm, for kuroGEL Maxi 20*	1	700-0147
Comb, 28 sample wells, 1,5 mm, for kuroGEL Maxi 20	1	700-0148
Comb, 40 sample wells, 1,5 mm, for kuroGEL Maxi 20*	1	700-0149
Comb, 16 sample wells, 2,0 mm, for kuroGEL Maxi 20	1	700-0150
Comb, 20 sample wells, 2,0 mm, for kuroGEL Maxi 20*	1	700-0151
Comb, 28 sample wells, 2,0 mm, for kuroGEL Maxi 20	1	700-0152
Comb, 40 sample wells, 2,0 mm, for kuroGEL Maxi 20*	1	700-0153

*multichannel pipette compatible

Accessories for kuroGEL Maxi 20

Casting options: Casting gates with integral silicone seals effectively seal the tray without the need for tape, provided the silicone gasket faces outwards. 20 cm long Super-Seals offer total versatility in casting, allowing the gel length to be tailored to each user's personal requirements.

Coloured loading strips (optional) aid visualisation during gel loading. Available in three different colours for easy visualisation of samples mixed with dyes such as bromophenol and xylene cyanol. Each colour strip has an adhesive backing allowing it to be easily affixed and removed with each application.

Gel scoops (optional) are ideal for safe and easy transfer of gels from staining or destaining tanks to a transilluminator or similar surface.

Description	Pk	Cat. No.
Gel casting tray for kuroGEL Maxi 20, 20×20 cm	1	700-0137
Casting gate with integral silicone seals, for kuroGEL Maxi 20 casting tray	2	700-0138
Casting gate Super-Seals for kuroGEL Maxi 20 casting tray	2	700-0139
Coloured loading strips for kuroGEL Maxi 20	12	700-0140
Gel scoop for 20 cm wide gel transfer	1	700-0141

**kuroGEL Maxi Plus 25 Horizontal**

The kuroGEL Maxi-Plus 25 Horizontal gel electrophoresis unit is ideal for high throughput analysis of nucleic acids. Large format, 25×30 cm, gel tray is ideal for high throughput techniques, such as HLA typing and screening PCR products.

- Multichannel pipette compatible combs, with a maximum 52-sample throughput, allow samples to be loaded quickly and easily from 96- and 384-well thermal cycler blocks
- Buffer recirculation ports can be connected to a peristaltic pump for buffer recirculation during electrophoresis to maintain buffer pH and prevent ionic gradient formation
- Coloured loading strips, for easy well detection when loading
- UV-transparent acrylic casting tray allows the user to handle the gel on the transilluminator with minimum risk of exposure to hazardous ethidium bromide
- Side handles for safe and easy transportation around the laboratory

Buffer volume (ml)	3000
Gel size W×L (mm)	250×300
Sample capacity	624
Unit W×L×H (mm)	330×560×90
Recommended running voltage (V)	150 - 200
Power output shrouded, connectors (Ø mm)	4

Delivery information: Gel tank supplied with removable casting tray; 6×1.0 mm thick, 16-sample combs; coloured loading strips and buffer recirculation ports.

Description	Pk	Cat. No.
Horizontal gel unit, kuroGEL Maxi Plus 25, 25×30 cm	1	700-0154

Combs for kuroGEL Maxi Plus 25

Combs are colour coded and height adjustable, offering complete control over loading volume and well depth to a maximum 624-sample throughput. Twelve comb positions at 2 cm intervals along the tray for rapid, high throughput separation of multiple samples.

Comb slots: 12; comb thickness: 1,0, 1,5 or 2,0 mm; comb throughput: 26 to 52 samples.

Description	Pk	Cat. No.
Comb, 26 sample wells, 1,0 mm, for kuroGEL Maxi Plus 25*	1	700-0160
Comb, 52 sample wells, 1,0 mm, for kuroGEL Maxi Plus 25*	1	700-0161
Comb, 26 sample wells, 1,5 mm, for kuroGEL Maxi Plus 25*	1	700-0162
Comb, 52 sample wells, 1,5 mm, for kuroGEL Maxi Plus 25*	1	700-0163
Comb, 26 sample wells, 2,0 mm, for kuroGEL Maxi Plus 25*	1	700-0164
Comb, 52 sample wells, 2,0 mm, for kuroGEL Maxi Plus 25*	1	700-0165

*multichannel pipette compatible

Accessories for kuroGEL Maxi Plus 25

Casting options: Casting gates with integral silicone seals effectively seal the tray without the need for tape, provided the silicone gasket faces outwards. 25 cm long Super-Seals offer total versatility in casting, allowing the gel length to be tailored to each user's personal requirements.

Coloured loading strips (optional) aid visualisation during gel loading. Available in three different colours for easy visualisation of samples mixed with dyes such as bromophenol and xylene cyanol. Each colour strip has an adhesive backing allowing it to be easily affixed and removed with each application.

Gel scoops (optional) are ideal for safe and easy transfer of gels from staining or destaining tanks to a transilluminator or similar surface.

Description	Pk	Cat. No.
Gel casting tray for kuroGEL Maxi Plus 25, 25×30 cm	1	700-0155
Casting gate with integral silicone seals, for kuroGEL Maxi Plus 25 casting tray	2	700-0156
Casting gate Super-Seals for kuroGEL Maxi 20 casting tray	2	700-0157
Coloured loading strips for kuroGEL Maxi Plus 25	12	700-0158
Gel scoop for 25 cm wide gel transfer	1	700-0159

Electrophoresis

Gel Tanks

Horizontal electrophoresis systems, shiroGEL



Designed for ease of use and safe operation, the shiroGEL horizontal electrophoresis systems and accessories are built to withstand the rigours of everyday use. For leakproof performance the gel boxes and gel trays are moulded from thick acrylic. UV transparent gel trays aid in visualisation of samples. Cassettes protect the electrodes and allow for easy replacement. Gel casting is simple with the durable rubber casting gates. Slots in the sides of the trays allow for easy comb placement. The two piece design of the combs provides for vertical adjustment, giving the user control over the depth of the well. The combs supplied with the systems are 1.5 mm thick. Multiple combs, including those compatible with multichannel pipettes and different thicknesses, are also available. The 'EasyLift' gel box lid is easily removed using the side tabs and pressure pads. The lid is domed, to prevent condensation from dripping onto the gel, and is surrounded by a drip ring, to help recover the condensate and maintain buffer concentration.

- Moulded, durable construction
- Rubber gates for tapeless gel casting
- 'EasyLift' safety lid with buffer recapture system to maintain buffer concentration

Model	Mini 10	Midi Plus 10	Midi Plus 15
Buffer volume (ml)	225	300	500
Gel size W×L (mm)	70×100	150×100	150×150
Sample capacity	64	140	210
Unit W×L×H (mm)	90×210×90	175×265×90	175×265×90

Delivery information: Complete system including UV transparent gel tray is supplied with tank, lid, electrodes and 1.5 mm combs.

Description	Pk	Cat. No.
Horizontal gel unit, 7×10 cm, shiroGEL Mini 10	1	700-0250
Horizontal gel unit, 15×10 cm, shiroGEL Midi Plus 10	1	700-0253
Horizontal gel unit, 15×15 cm, shiroGEL Midi Plus 15	1	700-0255

Combs for shiroGEL horizontal

Description	Pk	Cat. No.
Comb, 5-well, 1.5 mm thickness for 7 cm gel tray	1	700-0263
Comb, 8-well, 1.0 mm thickness for 7 cm gel tray	1	700-0264
Comb, 10-well, 1.5 mm thickness for 7 cm gel tray	1	700-0258
Comb, 12-well, 1.0 mm thickness for 7 cm gel tray*	1	700-0259
Comb, 12-well, 1.5 mm thickness for 7 cm gel tray*	1	700-0260
Comb, 16-well, 1.0 mm thickness for 7 cm gel tray	1	700-0261
Comb, 16-well, 1.5 mm thickness for 7 cm gel tray	1	700-0262
Comb, 8-well, 1.0 mm thickness for 15 cm gel tray	1	700-0288
Comb, 8-well, 1.5 mm thickness for 15 cm gel tray	1	700-0289
Comb, 10-well, 1.0 mm thickness for 15 cm gel tray	1	700-0265
Comb, 10-well, 1.5 mm thickness for 15 cm gel tray	1	700-0266
Comb, 12-well, 1.0 mm thickness for 15 cm gel tray	1	700-0267
Comb, 12-well, 1.5 mm thickness for 15 cm gel tray	1	700-0268
Comb, 14-well, 1.0 mm thickness for 15 cm gel tray*	1	700-0269
Comb, 14-well, 1.5 mm thickness for 15 cm gel tray*	1	700-0270
Comb, 14-well, 2.0 mm thickness for 15 cm gel tray*	1	700-0271
Comb, 16-well, 1.0 mm thickness for 15 cm gel tray	1	700-0272
Comb, 16-well, 1.0 mm thickness for 15 cm gel tray*	1	700-0273
Comb, 16-well, 1.5 mm thickness for 15 cm gel tray*	1	700-0274
Comb, 16-well, 2.0 mm thickness for 15 cm gel tray*	1	700-0275
Comb, 18-well, 1.0 mm thickness for 15 cm gel tray*	1	700-0276
Comb, 18-well, 1.5 mm thickness for 15 cm gel tray*	1	700-0277
Comb, 20-well, 0.75 mm thickness for 15 cm gel tray	1	700-0278
Comb, 20-well, 1.0 mm thickness for 15 cm gel tray	1	700-0279
Comb, 20-well, 1.5 mm thickness for 15 cm gel tray	1	700-0280
Comb, 20-well, 2.0 mm thickness for 15 cm gel tray	1	700-0281
Comb, 28-well, 0.75 mm thickness for 15 cm gel tray*	1	700-0282
Comb, 28-well, 1.0 mm thickness for 15 cm gel tray*	1	700-0283
Comb, 28-well, 1.5 mm thickness for 15 cm gel tray*	1	700-0284
Comb, 30-well, 1.0 mm thickness for 15 cm gel tray*	1	700-0285
Comb, 30-well, 1.5 mm thickness for 15 cm gel tray*	1	700-0286
Comb, 35-well, 1.5 mm thickness for 15 cm gel tray	1	700-0287

*multichannel pipette compatible

Accessories for shiroGEL horizontal

Description	Pk	Cat. No.
UV transparent gel tray for shiroGEL Mini 10	1	700-0251
UV transparent gel tray for shiroGEL Midi Plus 10	1	700-0254
UV transparent gel tray for shiroGEL Midi Plus 15	1	700-0256
Casting dam for 7 cm gel tray	2	700-0252
Casting dam for 15 cm gel tray	2	700-0257



Power supplies, Power Source



VWR Collection Power Source power supplies meet a wide range of applications, including DNA, RNA and protein electrophoresis, and blotting. Designed with safety in mind, they are loaded with the features that modern molecular biology applications demand.

Two models are available with voltage ranges to 300 V and current ranges to 3000 mA. Operating modes include constant voltage or constant current with automatic crossover. Operation can be timed or continuous.

The Power Source power supplies offer short circuit and over-current/over-voltage protection. No load and load change detection systems are incorporated into the software. Programming also includes an option for automatic recovery after a power failure.

Compact in design with a small footprint, the unit is also stackable to save space. For easy viewing and setting of parameters on the bench or on a shelf, the front of the power supply can be raised with the integral folding feet.

- Meets a wide range of applications
- Constant voltage or constant current with automatic crossover
- Timed or continuous operation
- Four sets of colour-coded output terminals
- Compact design with small footprint

Model	300 V	250 V
Output voltage range/increments (V)	2 - 300/1	5 - 250/1
Output current range/increments (mA)	4 - 500/1	10 - 3000/10
Output power range/increments (W)	90 max/not applicable	1 - 300/1
Operating constant modes	Current, voltage	Current, voltage, power
Timer	1 - 999 minutes or continuous	1 - 99 h 59 or continuous
Programmable	No	Yes
W×D×H (mm)	190×250×80	190×250×80
Weight (kg)	2,2	2,5
Input voltage (V)	230	230

Description	Pk	Cat. No.
Power Source power supply, 300 V, EU-plug	1	700-0112
Power Source power supply, 300 V, UK-plug	1	700-0113
Power Source power supply, 300 V, CH-plug	1	700-0114
Power Source power supply, 250 V, EU-plug	1	700-0115
Power Source power supply, 250 V, UK-plug	1	700-0116
Power Source power supply, 250 V, CH-plug	1	700-0117

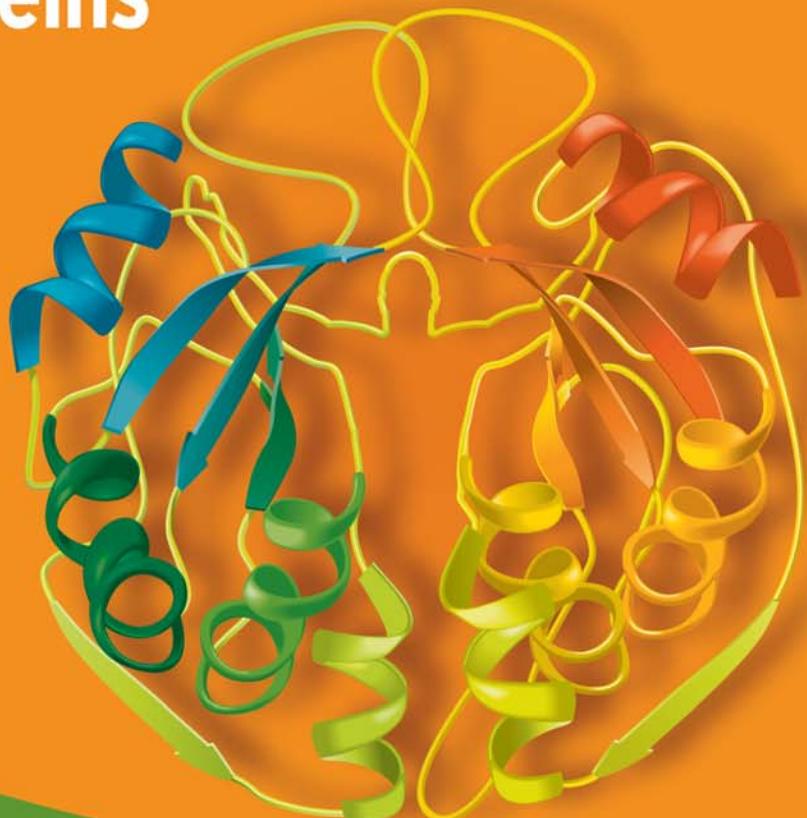
PIPETTE CALIBRATION AT VWR INTERNATIONAL

VWR
PIPET SERVICES™

All brands and all models
calibrated by certified technicians.

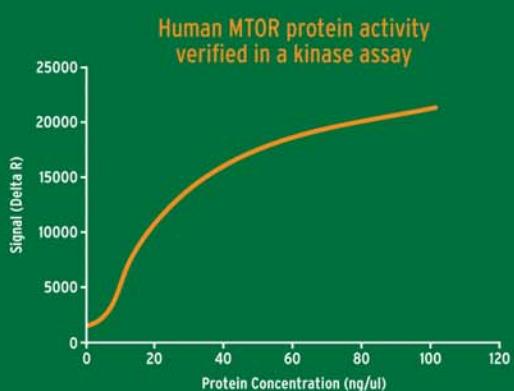
6,000 Recombinant Human Proteins

More Assays!
Better Assays!



The Largest Collection of Mammalian Cell-Derived Proteins

- Protein functional studies
- Compound screening
- Immunogens for antibody production
- Assay standards: ELISA, Mass Spec, and more



origene.com/protein

 **ORIGENE**
Your Gene Company



PCR Cloning

116

Cloning

Perfect PCR cloning kit**5 PRIME**

For direct cloning of PCR products generated by *Taq* and other non proofreading DNA polymerases.

- Efficient UA-cloning system with high specificity
- Simple and quick procedure - approximately 40 minute procedure from cloning to plated cells

Delivery information: Kit contains 2X ligation master mix (200 μ l), pPrime cloning vector (2.0 μ g), and RNase-free water (1.7 ml).

Pk	Cat. No.
40 Assays	PRME2201310

**THE CHEMICAL BRAND
FROM VWR INTERNATIONAL**



Order your free copy online at <http://eu.vwr.com/chemical>



TrueORF Gold cDNA Clones

Protein Expression
Guaranteed!



Why settle for clones
with little validation?

Choose TrueORF Gold.

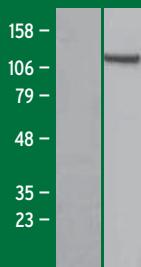
Expression validated by Western

Sequence verified

Transfection ready

Easily shuttled into 60 vectors

Next-day shipment



HEK293 were transfected with L) empty vector R) TrueORF for Myc/DDK-tagged hTERT (Cat# RC217436). The lysates were analyzed using anti-DDK antibody to show over-expression of hTERT.
*DDK is the same as FLAG.



ORIGENE
Your Gene Company

origene.com/TrueORF_Gold

pure | precise | performance

For research in DNA, RNA,
Protein, Cell Culture
and Histology, expect superior
performance
from AMRESCO's family of
products.



EZ-Vision®

NEXT GEL®

RiboZol™

Rapid Western Kits

Ready PCR Mix

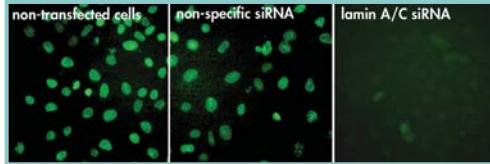
HistoChoice®

**Antibiotics, Reagents,
Buffers and more.**

Transfection

Reagents

120



Transfection

Reagents

DNA and siRNA transfection reagent, jetPRIME®

Polyplus-transfection



The jetPRIME® DNA and/or siRNA transfection reagent is a powerful, and versatile reagent designed to ensure high DNA transfection efficiency and excellent gene silencing in a variety of adherent cells. It is ideal for co-transfection of DNA and siRNA. jetPRIME® is gentle to cells since it requires low amounts of reagent and nucleic acid during transfection. Effective and non toxic DNA and siRNA delivery is essential for reliable scientific results.

- High DNA transfection efficiency
- Uses low amounts of reagent and nucleic acid
- One reagent for DNA and/or siRNA transfection
- Gentle to cells

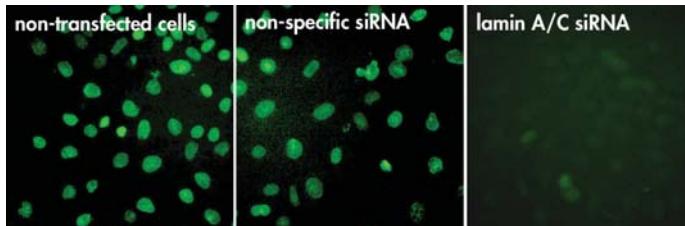
Delivery information: Supplied with an optimised sterile buffer which must be used to ensure successful transfection experiments. The concentrated buffer provided with PPLU114-75C must be diluted 1:5 in sterile H₂O just prior to use. 1.5 ml is sufficient to perform ca. 375 transfections in 6-well plates.

Description

Description	Pk	Cat. No.
jetPRIME® DNA and siRNA transfection reagent, 0,75 ml, with 60 ml jetPRIME® buffer	0,75 ml	PPLU114-07
jetPRIME® DNA and siRNA transfection reagent, 1,5 ml, with 2×60 ml jetPRIME® buffer	1,5 ml	PPLU114-15
jetPRIME® DNA and siRNA transfection reagent, 5×1,5 ml, with 120 ml 5X jetPRIME® buffer	7,5 ml	PPLU114-75C
jetPRIME® DNA and siRNA transfection reagent, 5×1,5 ml, with 10×60 ml jetPRIME® buffer	7,5 ml	PPLU114-75

siRNA transfection reagent, INTERFERin®

Polyplus-transfection



INTERFERin® is a powerful, ready to use siRNA reagent which provides more than 90% silencing efficiency at 1 nM siRNA in a wide variety of cells. For high throughput screening applications see INTERFERin®-HTS.

- Easy standard protocol
- Gentle mode of action for more robust data and excellent cell viability
- Compatible with serum and antibiotics

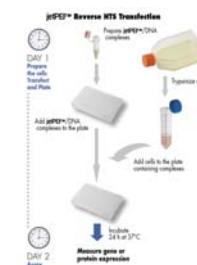
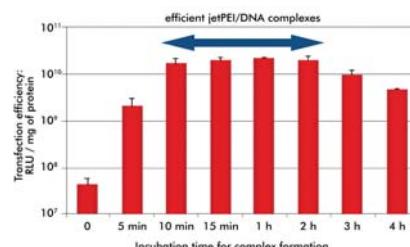
Delivery information: 1 ml of INTERFERin® is sufficient to perform 500 to 1000 transfections in 24-well plates.

Description

Description	Pk	Cat. No.
INTERFERin® siRNA transfection reagent, 1 ml	1 ml	PPLU409-10
INTERFERin® siRNA transfection reagent, 5×1 ml	5	PPLU409-50

HTS DNA transfection reagent, jetPEI®

Polyplus-transfection



jetPEI® transfection reagent is a linear polyethylenimine derivative, free of components of animal origin, providing highly effective and reproducible gene delivery. jetPEI® transfection reagent is particularly well suited for automated or manual High Throughput Screening (HTS) with three protocols available: reverse, batch and forward.

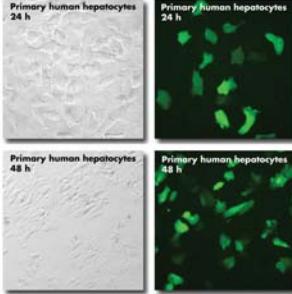
- Fast and efficient methods to transfet cells for HTS
- Exceptionally reproducible results
- Well suited for automation
- Compatible with serum and antibiotics
- Reverse, batch and forward protocols available

Delivery information: 150 mM NaCl sterile complex-formation solution is required to dilute the reagent and DNA. The solution is not included with all items. 1 ml of jetPEI® transfection reagent is sufficient to perform 2000 transfections in 96-well plates.

Description	Pk	Cat. No.
jetPEI® HTS DNA transfection reagent, 1 ml, without NaCl solution	1 ml	PPLU101-10
jetPEI® HTS DNA transfection reagent, 1 ml, with 50 ml NaCl solution	1 ml	PPLU101-10N
jetPEI® HTS DNA transfection reagent, 4×1 ml, without NaCl solution	4 ml	PPLU101-40
jetPEI® HTS DNA transfection reagent, 4×1 ml, with 4×50 ml NaCl solution	4 ml	PPLU101-40N
jetPEI® HTS DNA transfection reagent, 10 ml, without NaCl solution	10 ml	PPLU101B-010
jetPEI® HTS DNA transfection reagent, 10 ml, with 2×250 ml NaCl solution	10 ml	PPLU101B-010N

DNA transfection reagent, jetPEI® -Hepatocyte

Polyplus-transfection



jetPEI®-Hepatocyte is a DNA transfection reagent designed to transfect Hepatocyte-like cells. jetPEI®-Hepatocyte is recommended to transfect primary hepatocytes and cell lines such as human hepatocarcinoma HepG2 and primary hepatocytes.

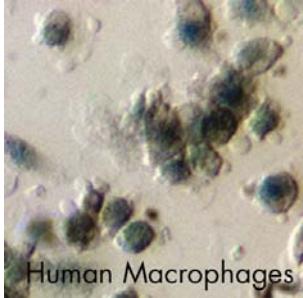
- 50% efficiency in hepatocyte-like cells and primary hepatocytes
- Gentle to cells
- Easy to use protocol
- Compatible with serum and antibiotics

Delivery information: 150 mM NaCl solution is included. 0.5 ml of jetPEI®-Hepatocyte transfection reagent is sufficient to perform up to 160 transfections in 24-well plates.

Description	Pk	Cat. No.
jetPEI®-Hepatocyte DNA transfection reagent, 0,1 ml, with 5 ml NaCl solution	100 µl	PPLU102-01N
jetPEI®-Hepatocyte DNA transfection reagent, 0,5 ml, with 50 ml NaCl solution	500 µl	PPLU102-05N

DNA transfection reagent, jetPEI® -Macrophage

Polyplus-transfection



jetPEI®-Macrophage DNA transfection reagent is dedicated to the transfection of macrophage primary cells and cell lines which express mannose receptors, such as RAW 264.7.

- Efficient transfection in macrophage-derived cells and primary macrophages
- Easy to use protocol
- Compatible with serum and antibiotics

Delivery information: 150 mM NaCl solution is included. 0.5 ml of jetPEI®-Macrophage transfection reagent is sufficient to perform up to 250 transfections in 24-well plates.

Description	Pk	Cat. No.
jetPEI®-Macrophage DNA transfection reagent, 0,5 ml, with 50 ml NaCl 150mM	500 µl	PPLU103-05N

DNA transfection reagent, jetPEI® -FluoF

Polyplus-transfection

jetPEI®-FluoF is a fluorescein-conjugated linear polyethylenimine derivative (green label). It is designed to visualise transfected cells using confocal or normal fluorescence microscopy and flow cytometry.

- Excitation at 490 nm; emission at 520 nm
- Easy protocol
- Compatible with serum and antibiotics

Delivery information: 150 mM NaCl solution (50 ml) is included. 0.5 ml of jetPEI®-FluoF transfection reagent is sufficient to perform up to 250 transfections in 24-well plates.

Description	Pk	Cat. No.
jetPEI®-FluoF DNA transfection reagent, 0,5 ml, with 50 ml NaCl solution 150 mM	500 µl	PPLU105-05N

Transfection

Reagents

DNA transfection reagent, jetPEI® -FluoR

Polyplus-transfection

jetPEI®-FluoR is a tetramethylrhodamine-conjugated linear polyethylenimine derivative (red label) useful for double labelling and colocalisation experiments.

- Excitation at 555 nm; emission at 580 nm
- Easy protocol
- Compatible with serum and antibiotics

Delivery information: 150 mM NaCl solution (50 ml) is included. 0.5 ml of jetPEI®-FluoR transfection reagent is sufficient to perform up to 250 transfections in 24-well plates.

Description	Pk	Cat. No.
jetPEI®-FluoR DNA transfection reagent, 0,5 ml, with 50 ml NaCl solution 150 mM	500 µl	PPLU106-05N

DNA transfection reagent, jetPEI® -HUVEC

Polyplus-transfection

jetPEI®-HUVEC is a powerful transfection reagent optimised for the transfection of primary human endothelial cells, such as HUVEC (Human umbilical vein endothelial cells). Transfection efficiencies up to 50% have been reached with this reagent. jetPEI®-HUVEC is also recommended for the transfection of vascular endothelial cells of various origins and appears to be well suited for such fragile primary cells.

- 50% transfection efficiency in HUVEC
- As efficient as electroporation
- Easy to use protocol
- Good cell viability
- Compatible with serum and antibiotics

Delivery information: 150 mM NaCl solution is included. 0.5 ml of jetPEI®-HUVEC transfection reagent is sufficient to perform up to 125 transfections in 24-well plates.

Description	Pk	Cat. No.
jetPEI®-HUVEC DNA transfection reagent, 0,1 ml, with 5 ml NaCl solution	100 µl	PPLU108-01N
jetPEI®-HUVEC DNA transfection reagent, 0,5 ml, with 50 ml NaCl solution	500 µl	PPLU108-05N

DNA transfection reagent, FectoFly®

Polyplus-transfection

FectoFly Standard Protocol

DNA + cell culture medium or 150 mM NaCl solution FectoFly + cell culture medium or 150 mM NaCl solution



Incubate 72 h and measure recombinant protein expression

FectoFly® DNA transfection reagent is dedicated to the transfection of insect cells for the production of baculovirus and recombinant proteins. FectoFly® provides high level of transgene expression in both adherent and suspension insect cells, such as S2, SF9, SF21 and TN5.

- High protein expression and baculovirus production
- Global transfection solution for insect cells
- High transfection efficiency in adherent and suspension insect cells
- Does not contain any components of animal origin
- Easy to use and compatible with the use of serum and antibiotics

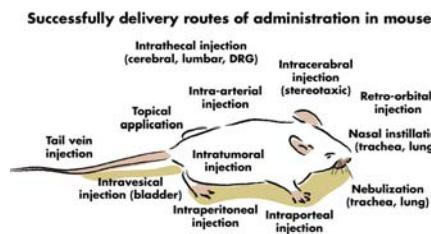
Delivery information: 150 mM NaCl solution included. 1 ml of FectoFly® is sufficient to perform 100 to 200 transfections in 6-well plates.

Description	Pk	Cat. No.
FectoFly® DNA transfection reagent, 1 ml, with 50 ml 150 mM NaCl solution	1 ml	PPLU112-10N
FectoFly® DNA transfection reagent, 4×1 ml, with 4×50 ml 150 mM NaCl solution	4 ml	PPLU112-40N



DNA/siRNA delivery reagent, *in vivo*-jetPEI®

Polyplus-transfection



in vivo-jetPEI® reagent provides versatile, reproducible and reliable delivery of nucleic acid (DNA and siRNA) in animal models, for functional studies and RNA interference experiments using various administration routes. It is also well suited as a delivery vehicle for therapeutic approaches, including gene therapy, genetic vaccination, immune therapy and cancer treatment.

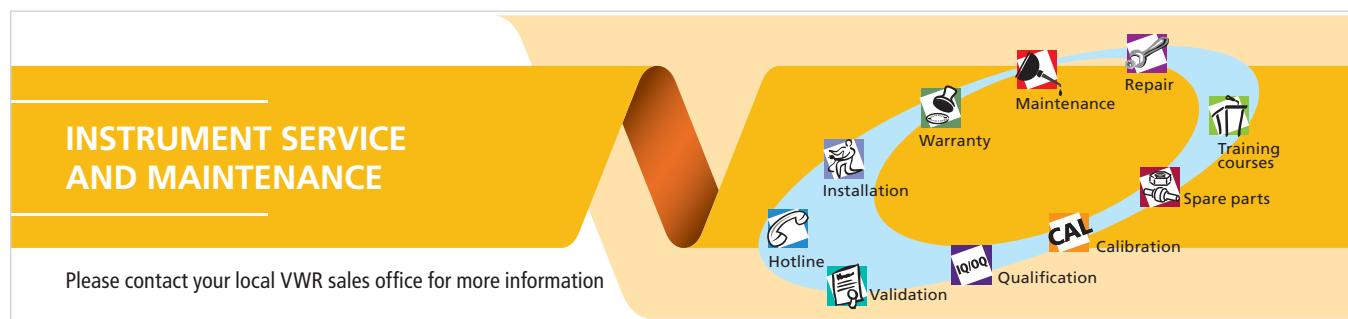
- Successful delivery of DNA, siRNA and oligonucleotides *in vivo*
- Multiple modes of administration in many species
- No detectable inflammatory response
- Reproducible results

Delivery information: 10% glucose solution is included. 0.1 ml of *in vivo*-jetPEI® delivery reagent is sufficient to perform up to 20 intravenous injections in mouse with 50 µg of DNA.

Description

in vivo-jetPEI® delivery reagent, 0,1 ml, with 10 ml glucose solution (10%)
in vivo-jetPEI® delivery reagent, 0,5 ml, with 2x10 ml glucose solution (10%)

Pk	Cat. No.
100 µl	PPLU201-10G
500 µl	PPLU201-50G



ALL YOU NEED FOR LIQUID HANDLING



Request our
accompanying
publication
'All you need
for Liquid Handling'



Flasks and Cylinders

**Pipettes, Burettes and
Accessories**

Dispensers and Burettes

Pipettes, Steppers and Tips

Straw Pipettes

Reagent Reservoirs

Robotic Tips



Reagents

126

Electroporators, Cuvettes &
Accessories

127

Electroporation

Electroporation solution kits, BTXpress™ BTX



The BTXpress™ is a single buffer solution, developed to quickly and efficiently deliver genes into mammalian cells that were previously considered "hard to transfect" by chemical and other non viral methods. This solution, in combination with the BTX electroporation instruments, provides researchers with the versatility and success needed across a broad range of cell types, while maintaining critical cell viability. Transfection using this high performance electroporation solution is equally effective in delivering DNA as well as siRNA into mammalian cells.

As a universal solution the BTXpress™ electroporation reagent can be used with electroporation generators, including Amaxa™ Nucleofector®, to deliver similar to equal performance without the cost associated with other systems.

- High efficiency transfection of cell lines and previously considered "hard to transfect" cells
- Low toxicity resulting in improved cell viability

- One buffer used in place of standard electroporation buffers for all mammalian cell types
- Versatility of choosing electroporation optimisation settings for the highest transfection efficiency with BTX instruments
- Increased numbers of tranfections per kit providing better value

Delivery information: BTXpress™ high performance electroporation solution is supplied either as a kit, which includes the BTX Plus cuvettes with transfer pipettes, or as a buffer alone.

Description	Pk	Cat. No.
BTXpress™ solution: 5 ml bottle for up to 50 reactions (without cuvettes)	5 ml	732-1284
BTXpress™ solution: 10 ml bottle for up to 100 reactions (without cuvettes)	10 ml	732-1285
Kit: 5 ml BTXpress™ solution and 50× 2 mm gap cuvettes with transfer pipettes, 50 reactions	1 KIT	732-1280
Kit: 5 ml BTXpress™ solution and 20× 4 mm gap cuvettes with transfer pipettes, 20 reactions	1 KIT	732-1281
Kit: 10 ml BTXpress™ solution and 100× 2 mm gap cuvettes with transfer pipettes, 100 reactions	1 KIT	732-1282
Kit: 10 ml BTXpress™ solution and 40× 4 mm gap cuvettes with transfer pipettes, 40 reactions	1 KIT	732-1283

E-BUSINESS

More than just a webshop for all of your laboratory needs

Please visit us at: <http://eu.vwr.com/e-business>



Electroporation cuvettes



The VWR electroporation cuvettes are made from clear, medical grade polycarbonate and are compatible with all common commercially available electroporators. Available in 3 gap sizes to meet common application requirements - 1 mm for highest field strength, suitable for bacteria; 2 mm gap for intermediate requirements; 4 mm gap for lowest field strength, suitable for mammalian cells and some plant cells.

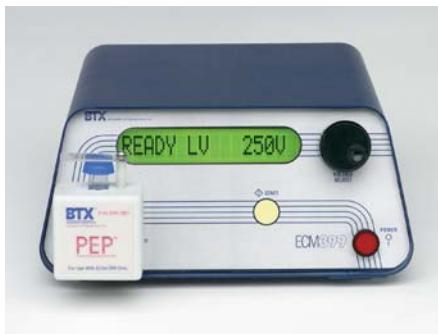


- Sterilised by gamma irradiation and individually packaged for assured sterility
- Polished aluminium lowers arcing frequency
- Colour coded caps for easy identification of gap sizes
- Round caps for easy, single handed cap removal

Description	Volume (µl)	Pk	Cat. No.
Cuvettes with 1 mm gap size, grey cap	20 - 90	50	732-1135
Cuvettes with 2 mm gap size, blue cap	40 - 400	50	732-1136
Cuvettes with 4 mm gap size, yellow cap	80 - 800	50	732-1137

Electroporator system, ECM® 399

BTX



The ECM 399 is an exponential decay wave electroporation system specifically designed (in High Voltage Mode) to deliver the field strengths and pulse lengths required for the simple transformation of bacterial and yeast cells. In Low Voltage Mode the ECM 399 has also been used for limited transfections of mammalian cells.



- Simple three-step operation: switch on, dial in voltage and deliver pulse
- Compact and portable, saving valuable laboratory space

Interfaces	Digital user interface
Charge time	5 seconds maximum
Voltage range Low Voltage Mode / 2 V resolution	2 - 500 V
Voltage range High Voltage Mode / 10 V resolution	10 - 2500 V
Capacitance in High Voltage Mode	36 µF
Capacitance in Low Voltage Mode	1050 µF
Controls	Single rotary encoded for voltage selection; Additional on/off power and start switches
Operational status	Internal self test upon start-up
Resistance	150 ohms
Safety	Short circuit and arc proof
WxDxH (mm)	230x195x110
Weight (kg)	3.2
Display	16-character LCD backlit

Delivery information: Each system includes ECM 399 generator with universal power supply, PEP (Personal Electroporation Pack) 'plug-in' cuvette module, cuvettes (10 each of 1 mm, 2 mm and 4 mm gap sizes), and cuvette rack

Description	Pk	Cat. No.
ECM 399 electroporation system	1	732-0003
ECM 399 generator only	1	732-0036

Accessories

Description	Pk	Cat. No.
Personal Electroporation Pack	1	700-4850

Electroporator, ECM® 630

BTX



The ECM 630 is a powerful exponential decay wave electroporation system designed for in vitro and in vivo electroporation applications, including mammalian and plant cell transfections, drug delivery and bacteria and yeast transformations.



- Precision Pulse™ provides the user with full flexibility in choosing a wide range of time constants
- Over 200 protocols are available, including the ability to reproduce protocols from competitive electroporators

Electroporation

Electroporators, Cuvettes & Accessories

Interfaces	Digital user interface
Charge time	5 seconds maximum
Voltage range Low Voltage Mode / 1 V resolution	10 - 500 V
Voltage range High Voltage Mode / 5 V resolution	50 - 2500 V
Precision Pulse™ time constants LV mode	>8500 RC
Precision Pulse™ time constants HV mode	284 RC
Amperage limit LV mode	6000 A
Amperage limit HV mode	3000 A
Safety	Short circuit proof
WxDxH (mm)	140x318x311
Weight (kg)	4,5
Display	20x4-character LCD

Delivery information: Each system includes ECM 630 generator with universal power supply, safety stand, cuvettes (10 each of 1 mm, 2 mm and 4 mm gap sizes), and cuvette rack

Description	Pk	Cat. No.
ECM 630 electroporator	1	732-0022
ECM 630 generator only	1	732-0037

Electroporation system, ECM® 830

BTX



The ECM 830 is a square wave electroporation system designed for all in vitro and in vivo electroporation applications, including mammalian and plant cell transfections, embryo manipulation, nuclear transfer, and bacterial and yeast transformations.

- Square wave technology offers the ability to transfet cells efficiently and with higher cell viabilities
- User control of all parameters gives ultimate flexibility in protocols

The optional footswitch functions in place of the start button on the front of the generator. It allows hands-free operation of the ECM 830 generator, which is particularly useful when conducting in vivo/in ovo gene delivery, or nuclear transfer/cloning when both hands are needed for sample manipulation.

Interfaces	Digital user interface
Charge time	13 seconds maximum
Voltage range Low Voltage Mode / 1 V resolution	5 - 500 V
Voltage range High Voltage Mode / 5 V resolution	505 - 3000 V
Capacitance in High Voltage Mode	110 µF
Capacitance in Low Voltage Mode	4000 µF
Pulse length range, HV mode/1 µs resolution	10 - 600 µs
Pulse length range, LV mode/0.1 s resolution	1 - 10 s
Pulse length range, LV mode/1 ms resolution	1 - 999 ms
Pulse length range, LV mode/1 µs resolution	10 - 999 µs
Safety	Arc Quenching™
WxDxH (mm)	140x318x311
Weight (kg)	6,8
Display	20x4-character LCD

Delivery information: Each system includes ECM 830 generator with universal power supply, safety stand, cuvettes (10 each of 1 mm, 2 mm and 4 mm gap sizes), and cuvette rack

Description	Pk	Cat. No.
ECM 830 electroporation system	1	732-0024
ECM 830 generator only	1	732-0038

Accessories

Description	Pk	Cat. No.
Footswitch, model 1250FS	1	732-0026



Multiwell plate electroporators, High Throughput HT 25 and HT 96 well systems

BTX



The High Throughput (HT) 25- or 96-well system is designed for rapid processing of multiple samples. Applications include transfection of mammalian cells, transformation of bacteria and yeast, and siRNA and cDNA library screening.



Each HT plate consists of either 96 or 25 individual wells with integrated electrodes. Four different plate formats are available: 96-well with 4 mm gap, 96-well with 2 mm gap, 25-well with 4 mm gap and 25-well with 2 mm gap. The plate handler fits both HT 25 and HT 96 plates and delivers the pulse parameters set in either the ECM 830 or ECM 630 generators to the plate. Two plate handlers are available: HT-200 delivers the applied pulse column by column automatically, HT-100 requires manual switching from one column to the next. Both plate handlers apply the same settings to each well within a column. The third component of the HT system is the electroporation

generator, which supplies the pulse to the plate handler. The choice of electroporation generator is based on application needs.

- Multiple samples can be run in seconds, allowing rapid optimisation of electroporation variables and high sample throughput
- Complete user control over electroporation settings allows great flexibility
- Saves valuable lab time, moving experiments through faster, and providing reliable results without the need for expensive reagents
- Eliminates cross-contamination with integrated electrodes and plate sealer

Description	Pk	Cat. No.
HT 96 with ECM 830 generator, HT 200 plate handler, and 2×96-well plates (4 mm gap size)	1	732-0344
HT 96 with ECM 830 generator, HT 100 plate handler, and 2×96-well plates (4 mm gap size)	1	732-0343
HT 96 with ECM 630 generator, HT 200 plate handler, and 2×96-well plates (4 mm gap size)	1	732-0475
HT 96 with ECM 630 generator, HT 100 plate handler, and 2×96-well plates (4 mm gap size)	1	732-0474
HT 25 with ECM 830 generator, HT 200 plate handler, and 6×25-well plates (4 mm gap size)	1	732-0342
HT 25 with ECM 830 generator, HT 100 plate handler, and 6×25-well plates (4 mm gap size)	1	732-0341
HT 25 with ECM 630 generator, HT 200 plate handler, and 6×25-well plates (4 mm gap size)	1	732-0473
HT 25 with ECM 630 generator, HT 100 plate handler, and 6×25-well plates (4 mm gap size)	1	732-0472

Accessories

Description	Pk	Cat. No.
HT-200 plate handler, automatic column switching	1	732-0362
HT-100 plate handler, manual column switching	1	732-0361
Electroporation plates, 96-well, 4 mm gap, 250 µl	1	732-0477
Electroporation plates, 96-well, 2 mm gap, 125 µl	1	732-0476
Electroporation plates, 25-well, 4 mm gap, 250 µl	1	732-0345
Electroporation plates, 25-well, 4 mm gap, 250 µl	6	732-0479
Electroporation plates, 25-well, 2 mm gap, 125 µl	1	732-0480
Electroporation plates, 25-well, 2 mm gap, 125 µl	6	732-0481

Electro cell manipulator, ECM® 2001

BTX



The ECM 2001 is a multifunctional electro cell manipulation instrument. It generates an AC waveform for benign dielectrophoretic alignment of cells. With microsecond switch-over time from AC to DC, efficient fusion can take place. After fusion AC re-application keeps cells together for the rounding off process. The DC square pulse section can be used as a stand-alone electroporation system with a wide range of voltages and pulse lengths capable of operating into low impedance loads.

- Versatile system suitable for electro cell fusion, embryo manipulation and/or electroporation
- Microprocessor controlled precision
- Wide range of parameters

Electroporation

Electroporators, Cuvettes & Accessories

AC parameters (alignment)	
Frequency (MHz)	1, fixed
Voltage (VRMS)	0 - 75
Duration (sec)	0 - 99
Post fusion AC amplitude	1/10 of prefusion amplitude
Post fusion AC duration (sec)	0 - 9
Pause between AC/DC (μsec)	50
DC pulse parameters (fusion/electroporation)	
High voltage mode (HV mode):	
Voltage (V)	500 - 3000
Pulse length (μsec)	1 - 99
Low voltage mode (LV mode):	
Voltage	10 - 500
Pulse length (msec)	0,01 - 0,99, 1 - 99
Weight (kg)	22
WxDxH (mm)	432x394x280

Electroporation system (ECM 2001EP)

Includes ECM 2001 generator, disposable cuvettes (1 mm, 2 mm and 4 mm gap sizes), safety stand and cuvette rack.

Description	Pk	Cat. No.
Electroporation system, ECM 2001EP	1	732-0802

Embryo manipulation system (ECM 2001EM)

Includes ECM 2001 generator, microslides (10 each with 0,5 mm, 1,0 mm and 1 each with 3,2 mm gap), micrograbber cables and coaxial banana plug cables.

Description	Pk	Cat. No.
Embryo manipulation system, ECM 2001EM	1	732-0615

Electro cell fusion system (ECM 2001EF)

Includes ECM 2001 generator, microslides (10 each with 0,5 mm and 1 each with 3,2 mm gap), micrograbber cables, meander fusion chamber (0,2 mm gap on glass microslide, including connector), flat electrode/divergent field (1,0 mm gap, 0,5 ml divergent field geometry), electrode adapter, coaxial banana plug cable.

Description	Pk	Cat. No.
Electro cell fusion system, ECM 2001EF	1	732-0616

Accessories

Description	Pk	Cat. No.
Electro cell fusion/embryo manipulator, ECM 2001, generator only	1	732-0617

Electroporation system, AgilePulse MAX™

BTX



The AgilePulse MAX™ System is an advanced electroporation solution for fast, efficient transfection of 2 to 20 ml of cell suspension. Specifically engineered for large volume applications, this system maximises cellular uptake with minimal heating and short cycle time to ensure high cell viability in further cell processing.

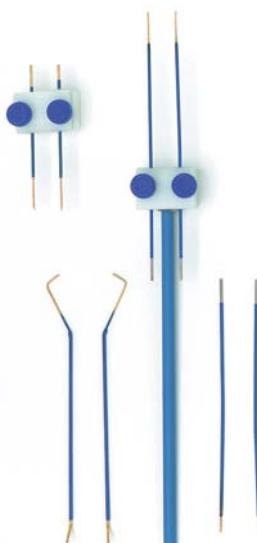
Simple to use, cells and polynucleotide are suspended in BTXpress Cytoporation® Medium T and transferred via sterile syringe to the large volume electroporation chamber where a programmed sequence of electric pulses is applied. Firstly, a sequence of short, high intensity pulses opens pores in the cell membranes, followed by long, low intensity pulses that drive the material into cells. PulseAgile® technology optimises these pulse parameters to maximise efficiency and cell viability.

Delivery information: Complete system includes Agilepulse MAX™ waveform generator, safety stand, 6 ml pulse stand, 2x 6 ml chambers, Cytoporation® Media T, and 4 mm gap cuvettes (bag of 10).

Description	Pk	Cat. No.
Electroporation system, AgilePulse MAX™, complete	1	732-1503
Accessories		
Description	Pk	Cat. No.
Electroporation chamber kit, 6 ml, includes chamber, base and electrode cable	1	731-0325
Electroporation stand for 6 ml chamber	1	731-0337
Safety stand for cuvette electroporation	1	731-0338



Electrodes, Genetrodes™ BTX



Genetrodes™ are paired, reusable, needle style electrodes that are ideal for *in vivo* and *in ovo* electroporation applications, including drug and gene delivery.

- Five models to suit the size and shape of the target electroporation area
- Each model consists of a pair of electrodes configured as either straight or bent L-shaped electrodes with gold tips
- The electrodes are placed into tissue following injection of the molecule of interest, and an electroporation pulse is delivered using an electroporation generator
- The electric field introduced by the Genetrodes™ causes transient pores to form in the cells of the tissue, allowing uptake of the molecules into cells
- Genetrodes™ are positioned in parallel at a predetermined gap in tissue using the Genetrode/Genepaddle Holder

Generator compatibility: ECM 830, ECM 2001

Voltage range: 0 - 200 V DC

Pulse length range: 10 μ sec to 99 msec in PBS

Pulse number range: 1 - 99 (depending on voltage and pulse length settings)

Genetrode™ holder electrode gap: 1 - 10 mm range

Description	Pk	Cat. No.
<i>In vivo</i> Genetrode™, straight, 5 mm*	1	732-0010
<i>In vivo</i> Genetrode™, straight, 10 mm*	1	732-0011
<i>In ovo</i> Genetrode™, bent L-shaped, 5 mm*	1	732-0012
<i>In ovo</i> Genetrode™, bent L-shaped, 3 mm*	1	732-0013
<i>In ovo</i> Genetrode™, bent L-shaped, 1 mm*	1	732-0014

* Requires Genetrodes/Genepaddle holder, square post cables and coaxial banana plug cable

Accessories

Description	Pk	Cat. No.
Genetrode/Genepaddle holder	1	732-0028

Electrodes, Genepaddles BTX



Genepaddles are non invasive, paddle-style, reusable electrodes designed for *in vivo* and *in vitro* applications, such as gene delivery (IVEGD) in mouse embryos. The electrodes are placed anterior and posterior to the embryo following injection of the molecule of interest, and an electroporation pulse is delivered.

- Gold plated rectangular paddles, available in two sizes 3x5 mm or 5x7 mm
- Genepaddles may be positioned in parallel at a predetermined gap in tissue using the Genetrode/Genepaddle Holder

Generator compatibility: ECM 830, ECM 2001

Voltage range: 0 - 200 V DC (do not use AC)

Pulse length range: 10 μ sec to 99 msec in PBS

Pulse number range: 1 - 99 (depending on voltage and pulse length settings)

Genetrode™ holder electrode gap: 1 - 10 mm range

Description	Pk	Cat. No.
Genepaddles, 5x7 mm paddles*	1	732-0032
Genepaddles, 3x5 mm paddles*	1	732-0950

* Requires Genetrodes/Genepaddle holder, square post cables and coaxial banana plug cable

Accessories

Description	Pk	Cat. No.
Genetrode/Genepaddle holder	1	732-0028

Electrodes, Tweezertrodes™ BTX



Tweezertrodes™ are reusable, tweezer style electrodes for *in vivo* drug or gene delivery applications. Tweezertrodes™ consist of a standard 11.5 cm long tweezer modified with stainless steel circular disc electrodes inserted at the tip. Following injection of the molecule of interest, the electrode discs grasp the target tissue and an electroporation pulse is delivered, initiating pore formation and incorporation of the molecules into the tissue cells that are in direct contact with the electrode.

- The gap between the electrodes may be adjusted up to 2 cm and have a positive electrode indicator
- Choice of 7 mm or 10 mm diameter electrode
- Platinum Tweezertrodes™ are also available, please enquire for further details

Electroporation

Electroporators, Cuvettes & Accessories

Generator compatibility: ECM 830, ECM 2001
 Voltage range: 0 - 1,0 KV
 Pulse length range: 10 μ sec to 99 msec in PBS

Description	Pk	Cat. No.
Tweezertrode™ electrode*, 7 mm diameter	1	732-0015
Tweezertrode™ electrode*, 10 mm diameter	1	732-0016

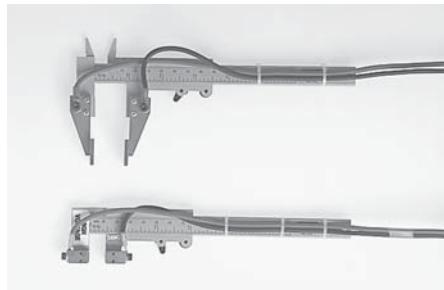
* Requires Tweezertrode™ connection cable

Accessories

Description	Pk	Cat. No.
Tweezertrode™ connection cable	1	732-0017

Caliper electrodes

BTX



Calliper electrodes are reusable, calliper-style electrodes for a variety of in vivo applications such as drug or gene delivery. Calliper electrodes consists of a calliper and a pair of plate electrodes. Two models are available. The 1x1 cm callipers with brass electrode plates are used for smaller animals. The larger callipers are supplied with two pairs of stainless steel electrode plates, 1,5x1,5 cm or 2x2 cm, and are used for larger surface areas.

- The electrode plates can be adjusted by using the roller mounted on the calliper
- The electrodes clasp the target tissue area following injection of the molecule of interest and electroporation pulses are delivered using a BTX generator
- The electric field introduced by the Calliper Electrodes cause transient pores to form in the cells of the tissue, allowing uptake of the molecules into cells

Generator compatibility: ECM 830, ECM 2001 and ECM 630
 Voltage range: 0 - 500 V (depending on electrode gap)
 Pulse length range: 10 μ sec to 99 msec (multiple pulsing permitted)
 Electrode gap: 0.1 to 13 cm

Description	Pk	Cat. No.
Caliper electrode, brass, 1x1 cm	1	732-0001
Caliper electrode, stainless steel, 2x2 cm (additional electrode 1,5x1,5 cm included)	1	732-0002

Electrodes, 2-Needle Array™

BTX



Stainless steel electrode, delrin handle

2-Needle Array™ electrodes are needle-style electrodes specifically designed for *in vivo* drug or gene delivery applications. The electrode consists of a reusable 2-Needle Array™ handle and sterile, disposable, 2-needle arrays. The electrode is available in two sizes. The 5 mm 2-needle array and handle is recommended for small muscle masses such as mouse tibialis. The 10 mm 2-needle array and handle is recommended for larger muscle masses such as rat gastronemus.

- Simple, inexpensive and safe non viral technique for *in vivo* gene transfer by the direct injection of plasmid DNA into muscle

Generator compatibility: ECM 830, ECM 2001 and ECM 630
 Voltage range: 0 - 500 V
 Pulse length range: 10 μ sec to 99 msec in PBS
 Handle length: 8 cm
 Needle length: 20 mm

Description	Pk	Cat. No.
2-Needle Array™ handle, 10 mm gap	1	732-0029
2-Needle Array™, 10 mm gap (requires 2-Needle Array™ handle)	6	732-0018
2-Needle Array™ handle, 5 mm gap	1	732-0030
2-Needle Array™, 5 mm gap (requires 2-Needle Array™ handle)	6	732-0019

Electro cell fusion system, Hybrimune™ BTX



The Hybrimune™ system is an advanced electrofusion solution for fast, efficient cell fusion in hybridoma production, hybrid cell formation or dendritic-tumour cell fusions. The Hybrimune™ system includes an innovative fusion chamber design, proprietary Cytofusion® medium and sophisticated, tri-phasic electric field pulses that quickly position cells and disrupt cell membranes for maximum cell fusion efficiency with short cycle times and minimal heating or turbulence for excellent cell viability.

The Hybrimune™ system delivers a cell alignment waveform in a patented sequence that enhances hybridoma yield. Compared to standard PEG fusion, yield improvements of 10-fold or more have been observed. The system utilises a gradual increase in AC amplitude to compress the cells for maximal cell-cell contact, then the DC pulse is applied and the researcher has the option of doing multiple pulses in different voltage and duration, if required, then a final AC waveform holds the cells in place and stabilises the fusion as the force is gradually reduced. The waveform generator is fully programmable for pulse parameter optimisation to maximise efficiency and cell viability. A computer is required for the application software but is not included in the system.

The optimisation and production chambers have been engineered to have identical electrical characteristics to facilitate direct scale-up to production once pulse parameters have been optimised. In addition the small chamber has a transparent bottom to permit visualisation of the cell alignment by inverted or regular microscope.

Delivery information: Each Hybrimune™ system includes: Hybrimune® waveform generator, 2 ml and 9 ml coaxial chambers, BTXpress™ Cytofusion Medium C, user interface software, cables and manual. Requires Windows-based laptop or PC (not included).

Parameter	Optimisation chamber	Production chamber
Volume	2 ml	9 ml
Outer Ø	45,72 mm	45,72 mm
Inner Ø	38,10 mm	38,10 mm
Gap	3,81 mm	3,81 mm
Well height	5 mm	18 mm
Inner/outer radius	0,833 mm	0,833 mm

Description	Pk	Cat. No.
Hybrimune™ electro cell fusion system, complete	1	731-0339
Accessories		
Description	Pk	Cat. No.
User interface application software	1	731-0340
Cell fusion chamber, 2 ml, with lid	1	731-0327
Cell fusion chamber, 9 ml, with lid	1	731-0326

Electroporation system, AgilePulse™ *in vivo*



BTX

Effectively introduced DNA vaccines represent a powerful and safe means for stimulating an immune response that recognises and eliminates target molecules in the body. However, traditional DNA vaccine delivery systems suffer from poor efficiency. The BTX AgilePulse™ *in vivo* system used for vaccine development and gene therapy provides an intra-dermal/intra-muscular electroporation solution to produce maximum transfection efficiency. The AgilePulse™ *in vivo* system can be purchased with software supporting intra-dermal (ID) or intra-muscular (IM) applications.

For vaccine applications, DNA vaccination through the dermal layer is preferred since it is an easily accessible site that is immunologically active. After direct injection of plasmid DNA in the dermal layer, a programmed sequence of electric pulses is applied through a miniature parallel needle electrode array to promote cellular uptake and transfection. Cells in the surrounding tissue are transfected, including dendritic antigen-presenting cells and mesenchymal origin cells. Gene expression simulates the immune system to respond to the secreted antigen. Gene expression in skin is 100-fold higher when delivery is enhanced by electroporation compared to simply injecting plasmid DNA.

Electroporation

Electroporators, Cuvettes & Accessories

Interfaces	USB flash key
Voltage Range	50 - 1000 V
Pulse width	0,050 to 10 ms
Pulse Interval	0,200 - 1000 ms (5 kHz - 1 Hz)
Display	Touch screen
Controls	Footswitch
WxDxH (mm)	320x200x400
Weight (kg)	11,3

Description	Pk	Cat. No.
Electroporation system, AgilePulse™ <i>in vivo</i> (intra-dermal), complete	1	731-0341
Electroporation system, AgilePulse™ <i>in vivo</i> (intra-dermal), generator only	1	731-0359
Electroporation system, AgilePulse™ <i>in vivo</i> (intra-muscular), complete	1	731-0360
Electroporation system, AgilePulse™ <i>in vivo</i> (intra-muscular), generator only	1	731-0361

Accessories

Description	Pk	Cat. No.
Footswitch for hands-free operation	1	731-0342

Needle array electrodes, AgilePulse™

BTX



AgilePulse™ needle array electrodes are miniature needles designed to provide superior, highly uniform electric fields in dermal or muscular tissue as part of the AgilePulse™ *in vivo* ID (intra dermal) or IM (intra muscular) gene delivery electroporation system. Applications for these electrodes include intra-dermal DNA vaccine research and antibody production, cancer chemotherapy research or intra-muscular gene therapy.

The miniature parallel needle array is inserted directly into the target site for fast, reliable *in vivo* electroporation. The electric fields produced are the closest approximation to parallel plate electrodes, treating approximately 80% of the target area with 95% of the applied electric field. Several needle lengths and row spacing are available for various intra-dermal or intra-muscular applications. Needle arrays can be used for up to 500 pulses with proper care and maintenance.

- Uniform, reliable electric fields
- Miniature needles minimise tissue trauma
- Medical-grade plastic and surgical steel construction
- Safety-assured design
- Multiple configurations and sizes available

Delivery information: The needle array requires the needle array handle, which includes the electrode connector cable. The needle array handle must be ordered separately.

Description	Pk	Cat. No.
4-Needle array, intra-dermal, 4 mm gap, needle Ø 0,3 mm, length 2 mm	1	731-0328
6-Needle array, intra-dermal, 4 mm gap, needle Ø 0,3 mm, length 2 mm	1	731-0329
6-Needle array, intra-dermal, 6 mm gap, needle Ø 0,3 mm, length 2 mm	1	731-0330
6-Needle array, intra-muscular, 6 mm gap, needle Ø 0,3 mm, length 10 mm	1	731-0331
6-Needle array, intra-muscular, 6 mm gap, needle Ø 0,7 mm, length 25 mm	1	731-0332

Accessories

Description	Pk	Cat. No.
Needle array handle	1	731-0323
Adapter for needle array electrodes	1	731-0333

VWR COLLECTION



Delivering High Quality & Superior Performance

Please contact your local VWR sales office or
go to www.vwr.com for the latest news and special offers



Gel Documentation Spectrophotometers & Accessories

136

138

Detection

Detection

Gel Documentation

Gel documentation system, GenoMini



The GenoMini offers reproducible, high resolution digital images for gel documentation. The system is easy to use and allows real time images to be captured and viewed directly on a PC or laptop.

The GenoMini is used with a UV transilluminator that provides illumination from below the gel (the usual configuration for looking at Ethidium Bromide DNA gels). Other options include the use of transmitted white or blue light and, with a mini darkroom, overhead white and UV light. These flexible lighting options make the GenoMini suitable for generating images of a wide range of fluorescent samples.

Using the GenoMini it is possible to produce images of electrophoresis gels stained with any of the following dyes: Ethidium Bromide, Coomassie Blue, Silver Stain, SYBR® Gold, SYBR® Green, SYBR® Safe, GelStar®, SYPRO® Red, SYPRO® Ruby, SYPRO® Orange, Fluorescein, Rhodamine Red™, Texas Red™, Pro-Q® Diamond or Deep Purple™. As new dyes are released we work to optimise their use with the GenoMini, so please ask your VWR contact for updates.

GenoMini is also suitable for viewing and capturing images from agar plates of dark, light or two colour colonies, cells in flasks, autoradiographs, DNA, RNA or protein on membranes, spot and slot blots of DNA, RNA or protein, cells or solutions in microtitre plates and DNA or protein macroarrays.

GenoMini is the ideal system for laboratories on a limited budget, as the basic system can be purchased and then added to with options such as a UV transilluminator, white light transilluminator or conversion screen, safety hood, mini darkroom and printer.

- Digital camera with 10 mega-pixel resolution produces high definition images
- Hardware and software options allow the system to be cost-effectively upgraded as fluorescent applications change
- PC interface allows easy automation of image viewing and camera control
- Simple zoom and auto-focus functions to rapidly capture gels of any size

Note: SYBR, SYPRO, Pro-Q, Rhodamine Red and Texas Red are trademarks of Molecular Probes Inc., GelStar is a trademark of FMC Corporation, and Deep Purple is a trademark of Amersham Biosciences Ltd.

Description	Pk	Cat. No.
GenoMini gel documentation system	1	730-3002

Gel documentation system, GenoSmart2



The GenoSmart2 is a compact imaging system with manual control that is simple to use and is ideal for routine DNA and protein gel documentation. The GenoSmart2 has network capability using an Ethernet connection. This easy to upgrade system is supplied complete with GenoSoft analysis software. Gel images can be instantly printed or saved to a memory stick via the USB port for archiving or further processing.

Using the GenoSmart2 it is possible to produce images of electrophoresis gels stained with any of the following dyes: Ethidium Bromide, Coomassie Blue, Silver Stain, SYBR® Gold, SYBR® Green, SYBR® Safe, GelStar®, SYPRO® Red, SYPRO® Ruby, SYPRO® Orange, Fluorescein, Rhodamine Red™, Texas Red™, Pro-Q® Diamond or Deep Purple™. As new dyes are released we work to optimise their use with the GenoSmart2, so please ask your VWR contact for updates.

GenoSmart2 is also suitable for viewing and capturing images from agar plates of dark, light or two colour colonies, cells in flasks, autoradiographs, DNA, RNA or protein on membranes, spot and slot blots of DNA, RNA or protein, cells or solutions in microtitre plates and DNA or protein macroarrays.

This simple system requires little training.

- Real time images from 12/16 bit, 2 mega pixel camera
- Self-contained, microprocessor controlled darkroom
- Integrated colour LCD screen for image viewing
- Instant on-screen saturation detection
- Rapid photographic print production and secure image storage via USB memory stick or network connection

Description	Pk	Cat. No.
GenoSmart2 gel documentation system	1	730-1381

Accessories

Description	Pk	Cat. No.
Thermal printer, analogue	1	730-1261
Thermal paper, matt	1 Roll	730-2892
Thermal paper, glossy	1 Roll	733-2000



Gel documentation and analysis systems, GenoPlex and GenoPlex CHEMI



GenoPlex high resolution gel documentation and analysis systems are available in configurations suitable for all fluorescence and chemiluminescence applications. All models are fitted with a digital CCD camera (1,4, 2 or 5 mega pixels) which utilises the latest USB technology. GenoPlex offers a choice of camera resolution options, with a 12-bit camera that can be software modified to 16-bit. The GenoPlex CHEMI systems are equipped with a true 16-bit advanced cooled camera able to capture images of a wide range of chemiluminescent samples using common substrates.

The GenoPlex systems are fully computer controlled, with motor driven lenses as standard in both systems, with feedback as standard for GenoPlex CHEMI. The darkroom, fully light-tight and suitable for advanced chemiluminescent applications, has a robust, wide opening hinged door for easy access to the chamber and electronic auto-door lock with security function to prevent interruption during long exposures.

The GenoPlex systems incorporate advanced image capture software specifically developed to simplify the process of capturing gel images. GenoCapture image acquisition software is a fully automatic package that controls camera integration, exposure, lens and capture options with auto-focus configuration for precise focusing.

GenoSoft is an advanced, automated, analysis software that can rapidly analyse a gel from loading to output of results in a matter of seconds. Requiring minimal user training, GenoSoft is able to handle a wide range of media including gels, plates, films and spot blots.

- Modular system can be tailored to meet specific user requirements
- Automated PC control speeds up image capture and the analysis process
- 16-bit performance for very accurate gel data
- Auto-locking door protects against accidental UV exposure and large door opening provides easy access for gel positioning and viewing
- Optional motor driven optics and lighting options for easy system set-up and flexible imaging applications

Delivery information: The GenoPlex system includes a 12-bit digital CCD camera (16-bit file depth), motorised zoom lens, and UV filter (550 to 640 nm). The GenoPlex CHEMI systems include a 16-bit cooled digital CCD camera, motorised zoom lens with feedback, and 7-position motor driven filter wheel. All systems include a cabinet, UV transilluminator (312 nm*) with 20x20 cm filter size, visible light converter, white epi-light (overhead), GenoSoft analysis and GenoCapture image capture software, cables and support software pack.

Description	Pk	Cat. No.
GenoPlex CHEMI gel documentation and analysis system, 1,4 MP	1	730-3003
GenoPlex2 gel documentation and analysis system, 2 MP	1	730-1379
GenoPlex5 CHEMI gel documentation and analysis system, 5 MP	1	730-1380

* Other transilluminator wavelengths and combinations are available.

Accessories	Pk	Cat. No.
Description		
Thermal printer, digital	1	730-1260
Thermal paper, glossy	1 Roll	733-2000
Thermal paper, matt	1 Roll	730-2892

VWR.COM
TALKING YOUR LANGUAGE



The local website with global reach

Spectrophotometer, NanoVue™ Plus

GE Healthcare

**Measurement of low sample volumes made easy**

The NanoVue™ Plus spectrophotometer is an easy to use and reliable instrument for the measurement of nucleic acid and protein samples. Samples of 0,5 to 2 μ l can be pipetted directly onto a novel gold sample plate for measurement and then simply recovered using a pipette. If sample recovery is not required, the sample plate with hydrophobic coating can be quickly and easily wiped clean.



- Ideally suited to the life scientist where sample is limited and speed and convenience of analysis is key
- Eliminates the need for cuvettes, capillaries or other sample devices - just drop and read
- Pre-defined methods for nucleic acid quantitation, including concentration, purity and theoretical Tm
- Pre-defined methods for protein quantitation, including direct UV, Bradford, BCA, Biuret and Lowry, with the ability to run up to 27 standards

Light source	Long-life stabilised xenon flash lamp
Detector	Twin CCD array
Wavelength range (nm)	200 - 1100
Spectral bandwidth (nm)	5
Wavelength repeatability (nm)	$\pm 0,5$
Wavelength accuracy (nm)	± 2
Photometric accuracy	Maximum $\pm 1\%$ at 259 nm at 0,7 to 0,8 A using uracil
Display	Backlit graphical LCD
Method storage	90
Interfaces	USB port, optional Bluetooth®
Power supply	100 to 240 VAC $\pm 10\%$, 50/60 Hz, 50 VA
WxDxH (mm)	260x390x100
Weight (kg)	4,5

Delivery information: Supplied complete with software for Print Via Computer (PVC) and software CyDye™ and calibration fluid.

Description	Pk	Cat. No.
NanoVue Plus with SD card	1	28-9569-60
NanoVue Plus	1	28-9569-65
NanoVue Plus with printer	1	28-9569-66
NanoVue Plus with Bluetooth®	1	28-9569-67

Accessories

Description	Pk	Cat. No.
Path length calibration kit	1 KIT	28-9244-05
SD card	1	28-9432-14
Sample plate replacement kit, gold	1 KIT	28-9553-01

**PIPETTE CALIBRATION
AT VWR INTERNATIONAL**

VWR **PIPET SERVICES™**

All brands and all models
calibrated by certified technicians.

Microplate readers, Multiskan GO

Thermo Scientific



The Multiskan GO is a compact, reliable absorbance spectrophotometer microplate reader available in two instrument models, with or without a cuvette port. The instrument can be operated as a stand-alone unit using straightforward internal software or by using Thermo Scientific SkanIt software for PC control. Both the internal and PC software are available in multiple language versions, including English, French, German, Spanish, Portuguese, Russian, Chinese and Japanese. A broad wavelength range, including UV, makes this microplate reader ideal for a wide range of photometric applications, such as nucleic acid and protein analysis, enzyme assays, cytotoxicity and cell proliferation assays as well as apoptosis assays. The cuvette option provides a quick and easy way of measuring when there are only a couple of samples to be analysed.



The SkanIt software package supplied with the instruments provides easy assay optimisation, flexible data handling and convenient report formatting. The software also has a special remote control interface, which enables easy integration with automated systems.

- Freely selectable wavelengths by the monochromator for the demands of various assays
- Fast plate measurement and a full spectrum of a sample in less than 10 seconds
- Both microplate and cuvette reading capability available
- Shaking and incubation up to 45 °C for temperature-critical applications
- Robotic compatibility for high throughput environments

Model	Multiskan GO without cuvette port	Multiskan GO with cuvette port
Light source	Xenon flash lamp	Xenon flash lamp
Wavelength range (nm)	200 - 1000	200 - 1000
Wavelength selection	Monochromator	Monochromator
Bandwidth	<2,5 nm	<2,5 nm
Plate types	96- and 384-well	96- and 384-well
Absorbance range	0 - 4 Abs	0 - 4 Abs
Resolution	1 nm, 0,0001 Abs	1 nm, 0,0001 Abs
Absorbance accuracy	±1,0% or ±0,003 Abs (0 - 2 Abs), ±2,0% (2 - 2,5 Abs)	±1,0% or ±0,003 Abs (0 - 2 Abs), ±2,0% (2 - 2,5 Abs)
Precision	SD <0,003 Abs or CV <0,5% (Precision mode) SD <0,003 Abs or CV <1,0% (Fast mode)	SD <0,003 Abs or CV <0,5% (cuvettes)
Cuvette type (mm)	-	W×D×H: 12,5×12,5×(44 - 58)
Linearity (96-well plate)	0 - 2,5 Abs, ±2% at 450 nm	0 - 2,5 Abs, ±2% at 450 nm (also cuvette with beam window ≥2 mm)
Measurement time (96-well plate)	6 s (from A1 back to A1)	6 s (from A1 back to A1)
Measurement time (384-well plate)	10 s (from A1 back to A1)	10 s (from A1 back to A1)
Scan speed	200 - 1000 nm in 10 seconds	200 - 1000 nm in 10 seconds
Display	4,5-inch colour display	4,5-inch colour display
Software	Internal software or PC control with SkanIt software	Internal software or PC control with SkanIt software
Shaking	Linear	Linear (plates)
Incubation range (°C)	From ambient +2...45	From ambient +2...45
Interfaces	USB for computer connection USB memory stick for data export USB for external printer (HP PCL5 type)	USB for computer connection USB memory stick for data export USB for external printer (HP PCL5 type)
W×D×H (mm)	285×430×260	285×430×260
Weight (kg)	10,8	10,8

Delivery information: Supplied with SkanIt software.

Description	Pk	Cat. No.
Multiskan GO without cuvette port	1	736-0559
Multiskan GO with cuvette port	1	736-0560

µDrop Plate

µDrop Plate is a quick and easy tool for DNA and RNA assays using photometric measurement and sample volumes down to 2 µL. The fixed light path of the µDrop Plate allows direct calculation of the nucleic acid concentrations of the samples.

- dsDNA detection range from a few micrograms to a few milligrams per milliliter
- Sixteen sample positions for quick and easy measurement of sample volumes down to 2 µL
- Compatible with an eight channel pipette for easy sample addition
- Quick and easy to wipe off the samples in serial measurements
- Format flexibility with measurement slot for a rectangular cuvette
- Compatible with Multiskan GO and Varioskan Flash

Description	Pk	Cat. No.
µDrop Plate for up 16 samples, volumes 2 - 10µL, for use with microplate readers Multiskan GO and Varioskan Flash,	1	736-0754

Table of contents

Standard High Purity Plasmid Isolation	6	Real time PCR	77
Endotoxin Free Plasmid Isolation.....	8	cDNA synthesis	78
Fastfilter Plasmid Isolation	9	SYBR Green qPCR	82
Genomic DNA from blood	10	TaqMan Probe qPCR.....	86
Genomic DNA from plant	12	One -Step TaqMan qRT-PCR.....	89
Genomic DNA from tissue and cells	13	One -Step SYBR qRT-PCR.....	89
Genomic DNA from Yeast and Bacteria	15	Reference Gene Assays.....	90
Genomic DNA from Soil Water and Stool	16	HRM	91
Genomic DNA from Fungi.....	17	Hydrolysis Probe Genotyping	92
Genomic DNA from Insect and Mollusc.....	18	microRNA Profiling.....	93
Genomic DNA preparation.....	19	qPCR cyclers	94
RNA from Blood.....	20		
miRNA/mRNA Isolation	21		
RNA from Cells and soft Tissue	23	Electrophoresis.....	97
RNA from Fatty Tissue.....	25	Reagents & Buffers.....	98
RNA from Fibrous Tissue	26	Markers & Dyes	101
Total RNA	27	Gel Tanks	105
RNA Stabilisation	29	Power Supplies.....	113
PCR Clean up.....	30		
DNA/RNA Gel Extraction	32	Cloning	115
DNA/RNA Clean up	33	PCR cloning	116
Dye Terminator Removal	34		
DNA Storage	35	Transfection	119
Modifying Enzymes	39	Reagents.....	120
DNA/RNA modifying enzymes.....	40		
PCR	43	Electroporation.....	125
Standard PCR reagents.....	44	Reagents.....	126
Hot start PCR reagents	49	Electroporators , cuvettes & accessories	127
Direct PCR reagents	52		
High Fidelity PCR reagents.....	53	Detection	135
Long range PCR reagents	56	Gel Documentation	136
dNTPs and Buffers.....	57	Spectrophotometers & accessories	138
Tubes	61		
Strips	62		
Caps	63		
Plates.....	64		
Seals.....	68		
Heat sealers	70		
PCR workstations	72		
PCR cyclers	73		

Austria

VWR International GmbH
Graumanngasse 7
1150 Wien
Tel.: 01 97 002 0
Fax: 01 97 002 600
E-mail: info@at.vwr.com

Belgium

VWR International bvba
Researchpark Haasrode 2020
Geldenaksebaan 464
3001 Leuven
Tel.: 016 385 011
Fax: 016 385 385
E-mail: customerservice@be.vwr.com

Czech Republic

VITRUM Praha, spol. s r.o.
A VWR International Company
Pražská 442
CZ - 281 67 Stríbrná Skalice
Tel.: +420 321 570 321
Fax: +420 321 570 320
E-mail: praha@vitrum.cz

Denmark

VWR - Bie & Berntsen
Transformervej 8
2730 Herlev
Tel.: 43 86 87 88
Fax: 43 86 87 90
E-mail: info@dk.vwr.com

Finland

VWR International Oy
Valimotie 9
00380 Helsinki
Tel.: 09 80 45 51
Fax: 09 80 45 52 00
E-mail: info@fi.vwr.com

France

VWR International S.A.S.
Le Périgares – Bâtiment B
201, rue Carnot
94126 Fontenay-sous-Bois cedex
Tel.: 0 825 02 30 30 (0,15 EUR TTC/min)
Fax: 0 825 02 30 35 (0,15 EUR TTC/min)
E-mail: info@fr.vwr.com

Germany

VWR International GmbH
Hilpertstrasse 20a
D - 64295 Darmstadt
Tel.: 0180 570 20 00*
Fax: 0180 570 22 22*
E-mail: info@de.vwr.com
*0,14 €/Min. aus d. dt. Festnetz,
Mobilfunk max. 0,42 €/Min.

Hungary

VWR International Kft.
Simon László u. 4.
4034 Debrecen
Tel.: (52) 521-130
Fax: (52) 470-069
E-mail: info@hu.vwr.com

Ireland / Northern Ireland

VWR International Ltd /
VWR International (Northern Ireland) Ltd
Orion Business Campus
Northwest Business Park
Ballycoolin
Dublin 15
Tel.: 01 88 22 222
Fax: 01 88 22 333
E-mail: sales@ie.vwr.com

Italy

VWR International PBI S.r.l.
Via San Giusto 85
20153 Milano (MI)
Tel.: 02-3320311/02-487791
Fax: 800 152999/02-40090010
E-mail: info@it.vwr.com
info@internationalpbi.it

The Netherlands

VWR International B.V.
Postbus 8198
10005 AD Amsterdam
Tel.: 020 4808 400
Fax: 020 4808 480
E-mail: info@nl.vwr.com

Norway

VWR International AS
Haavard Martinsens vei 30
0978 Oslo
Tel.: 02290
Fax: 815 00 940
E-mail: info@no.vwr.com

Poland

Labart Sp. z o.o.
A VWR International Company
Limbowa 5
80-175 Gdańsk
Tel.: 058 32 38 200 do 204
Fax: 058 32 38 205
E-mail: labart@pl.vwr.com

Portugal

VWR International - Material de
Laboratório, Lda
Edifício Neopark
Av. Tomás Ribeiro, 43- 3 D
2790-221 Carnaxide
Tel.: 21 3600 770
Fax: 21 3600 798/9
E-mail: info@pt.vwr.com

Spain

VWR International Eurolab S.L.
C/ Tecnología 5-17
A-7 Llinars Park
08450 - Llinars del Vallès
Barcelona
Tel.: 902 222 897
Fax: 902 430 657
E-mail: info@es.vwr.com

Sweden

VWR International AB
Fagerstätgatan 18a
163 94 Stockholm
Tel.: 08 621 34 00
Fax: 08 621 34 66
E-mail: info@se.vwr.com

Switzerland

VWR International GmbH
Lerzenstrasse 16/18
8953 Dietikon
Tel.: 044 745 13 13
Fax: 044 745 13 10
E-mail: info@ch.vwr.com

UK

VWR International Ltd
Customer Service Centre
Hunter Boulevard
Magna Park
Lutterworth
Leicestershire
LE17 4XN
Tel.: 0800 22 33 44
Fax: 01455 55 85 86
E-mail: uksales@uk.vwr.com

China

VWR International China Co., Ltd
Suite 3B02, Qilai Building, No. 889
Yishan Road
Shanghai 200233, China
Tel.: +86- 21 521 388 22
Fax: +86- 21 521 33 933
E-mail: sales_china@vwr.com

India

VWR Lab Products Pvt. Ltd
2nd Floor, Front Wing,
135/12, Brigade Towers
Brigade Road
Bangalore 560025 India
Tel.: +91-2522-647911/922 (Mumbai)
Tel.: +91-80-41117125/26 (Bangalore)
Fax: +91-80-41117120
E-mail: vwr_india@vwr.com

Singapore

VWR Singapore Pte Ltd
18 Gul Drive
Singapore 629468
Tel.: +65 6505 0760
Fax: +65 6264 3780
E-mail: sales@sg.vwr.com

GO TO VWR.COM FOR THE
LATEST NEWS, SPECIAL OFFERS
AND DETAILS OF YOUR LOCAL
VWR DISTRIBUTOR